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WEALTH—ITS USE AND CONTROL

BY GEORGE E. ROBERTS*

THE soap-box orator speaking on the crowded street corner has his peculiar views of how wealth is used and who controls it. In picturesque language he seeks to visualize wealth by dollars—by millions of dollars.

"How long would it take you to become a millionaire?" he asks.

Without waiting for an answer, he replies with a rapid fire of statistics, "If you could save a thousand dollars a year you would be as old as Methuselah before your bank book would show seven figures—one 1 and six o's—to your credit.

"But suppose you save five hundred a year when would you be a millionaire? You might be one today if you were born the same year as Christ.

"But suppose you can save only one hundred dollars a year? To be worth a million today you would have had to meet Noah as he came down the gang plank at Ararat."

Before anyone in the audience can ask about compound interest or investment of savings, the orator is showing how wealth is "pressing the crown of thorns on the bleeding brow of labor."

Soon he has shown, to his satisfac-

tion at least, that if wealth were evenly distributed, all in his audience would be sitting in limousines instead of standing on the curb.

Let us suppose that this orator had taken the bulletin of the Treasury Department which records the income on which taxes are paid, and let us divide that total income, without any deduction for income taxes, equally among the total population of the United States, how much more would each individual receive? It would be less than the weekly wage of the Metropolitan window-cleaner and not enough to pay for the gasoline, at present price, to run one of those automobiles which the soap-box orator was going to distribute so generously. And if all had automobiles, only the expert who knows the supremacy of the economic law and has studied market analysis would venture to guess the fabulous price at which gasoline then would sell.

Those who attack the existing order of society make their chief error in assuming that wealth in private hands is of no use to anybody but to the owners. That assumption runs throughout the agitation of the day, whether the discussion be on the street corner or in the private library. The fact too often

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lost sight of is that the right place to measure the distribution of wealth is not at the point of ownership, but at the point of consumption.

Wealth is of two general classes. First, there is what is known as consumable wealth. This consists of goods ready for consumption, such as foodstuffs, clothing, house furnishings, etc. If the reader will follow products into the markets and then into consumption he will see the fallacy of the assertion that two or three per cent of the population enjoy most of the benefits of existing wealth. Two or three per cent of the population do not eat most of the foodstuffs produced in this country, or wear most of the clothing, or burn most of the coal, or do most of the riding on the railways, or even purchase most of the automobiles.

The second general class of wealth consists of property which is used in producing the things mentioned in the preceding paragraph or in rendering direct service, such as lands, industrial plants, railroads, etc. This sort of wealth is not valued for itself: it is valued for the consumable wealth or service that it will produce.

A more specific illustration of the distinction between these two general classes is found in the following quotation from an article in a trade supplement of *The London Times*:

The things called "wealth" or "property" fall into two great groups. Let us put some of them into their right group, as follows:

First Group

A factory
A motor-truck
A gold sovereign
A bale of raw cotton
A Jacquard loom
Williams on "Real Property"
A sack of wheat
An ox
A roll of printing paper
A jar of marmalade in a grocery store

Second Group

A cottage
A touring car
A watch charm
A lady's blouse
A bicycle
Shakespeare's works
A loaf of bread
A roasted sirloin
A copy of The Times
The same jar on the breakfast table

The difference between the two groups is obvious. All these things are wealth, since all of them are worth something and can be sold for money. They are all property, since in respect of each of them there is one person whom a law-court would declare to be the owner to the exclusion of every other person. From the economic point of view, however, there is a clear-cut distinction between them, for, whereas the "goods" in the second group directly satisfy the wants of man, those in the first group do not. The latter are "consumption-goods"; the former, "production-goods," or capital.

Production-goods are destroyed as such in passing into consumption-goods, just as the latter in turn are destroyed, in a longer or shorter time, in satisfying human needs. A lady's blouse wears out very rapidly; the Jacquard loom that wove its material also wears out at last. The well-being of us all depends most closely on the supply of capital, which, as is now clear beyond dispute, is not some noxious weed which is choking the goodly growth of society, but the bridge between the gifts of nature and the needs of man, the link between the industry of the past and the industry of the future.

Sometimes the two kinds of goods, as in our last items, are alike in form and differ only in place, but all economic effort resolves itself in the end into turning production-goods into consumption-goods.

The truth is that in proportion to the production of wealth the consumption of the rich is insignificant. To supply the wants of two or three per cent of the population does not create the great trade which is today going on in America.

Because *Administration* is a journal of business analysis, its readers must realize that practically all the uses to which labor and capital are applied are for the common welfare. The vast expenditures for construction and equipment are for the purpose of serving in some manner the masses of the people, of supplying something they want and can afford to buy. No other employment exists for capital. It would not take many factories or railways to supply the wants of the rich. It is the wants of the millions that keep the wheels of business turning.

The truth is that the bulk of the large incomes from wealth go back into industry to increase production. The benefits inure to the great body of consumers. That part of the incomes of the rich which is converted into capital and used to increase production for the public market is devoted to a public use as truly, and perhaps more effectually, than if paid into a public treasury. The farmer who uses his surplus income to drain and otherwise improve his land and increase its productivity is using it in a manner which serves the public interest. What better use could the government make of it?

In these days a vigorous attack is made upon private property in land. Since the use of the land is necessary, it is said, to the support of the population, private ownership of land is in contravention of public rights. But private rights in land are based upon the theory that land will be better cared for and made more productive, and therefore will yield larger economic results and contribute more to the public welfare, under a system which vests absolute control, such as is assured by title deeds, than under any other system that has been tried.

Both arguments, therefore, recognize that the common good must control.

The question consequently becomes not one of theory but of practical results.

There are two general views of this social problem: one emphasizes the division of wealth, the other lays stress upon increasing the production of wealth. The former view is being tried in Russia where the party in power has boxed the compass and returned to the stage of compulsory labor, a system discredited as uneconomical, unprogressive, and inhumane. The latter view puts the emphasis upon liberty—the free play of individual initiative and ambition.

Laborers live today under a regime of personal liberty. It is not very far back in the history of the human race that the right of the common man to move from one locality to another as he pleased, and to choose his own trade, was denied. When the laborer was attached to an overlord there were, in some respects, greater security and more certainty from day to day than he obtains today.

Freedom of choice always has on the debit side the risk and penalty of mistakes. A great many people, in groping for their place in the social organization, make mistakes. Perhaps society, especially in industrial communities, does not do all that it might to assist these people. But who would suggest a surrender of this liberty to obtain relief? Under this regime of personal liberty everybody is free to forward his private interests, if he does it in conformity to the economic law. By this assertion I mean that he must do so by methods which promote the common welfare. By increasing the yield of the farm the farmer seeks primarily to forward his own interests, but in so doing he promotes the common welfare. This is the test of all legitimate effort to promote private interests.

In view of such a test it follows that if any group in the community, holding

by reason of its services a strategic position, attempts to take advantage of that position to impose its will arbitrarily upon the community, it commits an unfair, unjust, and unsocial act. Whenever organized capital or organized labor assumes the responsibility of a function vital to society, it must pay proper respect to the public interest in the manner in which the organization discharges or abandons that function. A part of society cannot be permitted to impose conditions that are injurious to the whole.

If the truth expressed in the preceding sentence be appreciated, it follows logically that the rights of the community as a whole should be not only highly exalted but also legally established. But at the same time the rights of the individual, where they harmonize with and promote the interest of all, must be legally safeguarded.

Every right-minded person must desire that the common lot shall continue to improve in the future as it has in the past. It is not strange that agitation, not only abroad but also at home, should be directed to economic equality now that political equality has been won. Both equality in benefits and equality in economic distribution are sought. But in a society essentially co-operative, where the sum total of production is the result of the joint efforts of the entire community, distribution must be based, by some system, upon the contribution of each individual to the total production. It is said that conditions are going to be different in the future from what they have been in the past; that political democracy will be of little consequence without democracy in industry and in other relations of life; that in the division between capital and labor, labor must receive more and capital less than in the past. So much misinformation

on these topics has been spread by the radical agitator that they must not be neglected even in a short article such as this.

But all this misinformation does not come from the street-corner agitator. Recently I read in an academic review published by a western university, the following, which sets forth very distinctly the peculiar twist which the radical gives to all facts related to the social order:

The really terrifying thing in the minds of our conservators of loyalty is the confused awareness that there are a great many people—working people for the most part—who are beginning to think, or at least vaguely to feel, that democracy has got to have a larger and deeper meaning than that of the ballot-box and the political horizon; that to have any real and satisfying content it must be extended to include the economic and industrial fields as well as the merely political. And this means not simply that the workers shall have “a voice” in the management of industry, but that they shall assume complete direction and control of it, to the practical elimination of the group commonly referred to as owners—the group in whose hands control has hitherto rested. That this is the end toward which the present unrest points will be evident to anyone who has followed the trend of British and continental labor movements, even if we leave Russia out of the count. Now, the reason why this proposition is so deeply treasonous and foully un-American is that it strikes with profane hands at the holiest of all our modern institutions, namely property. And, in spite of all denials, the real motive back of all our heresy-hunting, and our fruitful crop of proposed alien and sedition laws, and our unseating of duly elected Socialist legislators, is the dividend motive.

The college professor who wrote the preceding paragraph sees nothing in the right of private property but the interests of owners. He gives no recognition to the fact that the right of private property is based upon the belief, held

by most people, that it is essential to social progress. The experience of all the past, as most people believe, goes to show that men will work with greater interest and effectiveness for themselves than they will for others, and that with this motive stimulating effort throughout the industrial system the total output is greater, the distribution of comforts to the entire population is greater, and the progress of society is more rapid than by any other system proposed.

This professor does not boldly advocate that the "workers" shall assume complete direction and control of industry, "to the practical elimination of the group commonly referred to as owners," but he does not see how anybody, unless owners of the property or of other property which might be taken next, can object. This is his view of the controversy. All there is to it is the motive.

It is difficult to believe that the professor can be so ignorant of the fundamental principles upon which the existing order of society is based as his words would indicate. But certainly he is ignorant of them or knowingly misrepresents them. The professor may believe for himself that men will work just as zealously for a common fund as they will to create property which is to be their own and which they can give to their children, but he can hardly be so ignorant of the opinions of others as not to know that the great majority of people do not think so, and that our social institutions are not what they are for such a reason.

The social institutions of America are not the result of a conspiracy of property owners; they are based upon principles which are believed to encourage industry and production and to give results beneficial to all the people, whether property owners or not. The professor's theory is the preposterous one that nobody gets any benefit from

property unless he owns it. Such a theory would naturally lead the professor to the opinion that unless he owned a farm it would be a matter of indifference to him whether the crops were good or not.

There is not the slightest reason to believe that the wage-earners in any considerable numbers believe in communism or equal payments for all services. In every adjustment of wages throughout the trades there is as zealous a guard over established wage differentials as there is anywhere over property rights. And where is the difference between protecting these differentials as they are earned and protecting them when they are saved in the form of property? The service of saving is as real and vital to society as the service of producing, for that which is saved becomes an agency of production.

The savings of society, whether saved from earnings or from profits, have given industry the equipment which it has today and have raised the standard of living to what it is today. The man who owns no property and who spends his wages the same week he receives them is benefited by every development in industry, every investment of capital, which increases or cheapens the production of the things he wants to buy.

It is true that a minority of the population owns most of the productive property, and it is desirable that this situation shall be changed, but not by any method which reduces the output. It can be changed and is being changed by the development of individual capacity in the people themselves.

If democracy in industry—often spelled with capital letters—means equality in the ownership and in the management of great industries, there is no obstacle to such development except the natural difficulties which

arise when large numbers of people attempt to act together. Everything depends upon "facility of association," the ability to work together harmoniously and effectively for common interests and purposes. Emerson once said, "Facility of association is the measure of civilization." In other words, as people become enlightened and broad-minded they develop the ability to co-operate in higher and higher degree.

The truth is that it is still very hard for people to get along together without friction and antagonism. The great want of society today is not for fighters, not for those who appeal to the primitive instincts of suspicion and passion and who exaggerate and enlarge differences, but for peace-makers—for those who have the ability to adjust differences and to draw together for the common good all elements of society.

All the forces of agitation are working overtime upon the ills of society, but with scarcely a word about the great natural laws that underlie and control the development of society and by which all the progress of the past has been made.

The pivotal point of much of this agitation is the wage system. The advantage of the modern wage system is its simplicity. The employer furnishes the capital, assumes the responsibility of paying a fixed wage, and then takes the profits or bears the losses. The wage system endures because the terms are definite, responsibility is fixed, and authority for the direction of the business is concentrated. The wage system stands as a tentative working arrangement, subject constantly to the competition of thousands of more or less experimental and more or less successful efforts to improve upon it.

The joint-stock corporation affords abundant opportunity for co-operation

in industrial enterprises. Success is achieved often enough to show that everything depends upon the development of what has already been referred to in these pages as the "facility of association."

After presenting to the faculty of a school of business administration some of these facts and principles—I do not claim that they are new or startling but I do maintain that they are counting too little in the discussions of the day—I was followed by a speaker who outlined somewhat in detail the wonderful facility of association which exists in the plant of which he is a heavy stockholder. Success had come through doing little things first and then passing on to larger, until now the employees practically manage the plant.

But the plant's problems of co-operative selling and distribution still remain to be solved. The salesmen who market the goods manufactured insist upon the wage system, with no financial risks.

Farmers' creameries and elevator companies also show what may be done. They are not all successful but enough are to again show that success depends upon management and harmonious association. They point the way to the normal development.

Wage-earners in every line of industry may come into an important degree of control if they can develop that facility of association so necessary to any practical administration. The railroad employees in the United States, 2,000,000 in number, are now receiving something over \$1,500 per year each. If they would save \$50 per year each from the increases recently granted them by the Railroad Wage Board, they could buy control of the New York Central Railroad system in the first year, of the Baltimore and Ohio and the Erie systems in less than a year and of all the systems running

from Chicago to the Atlantic Coast within five years, at the present market prices of railroad stocks.

It is very much to be desired that the wage-earning class shall come into a large degree of ownership in the industries in which they are employed. But in order that such control shall be successful, it is necessary that it shall be reached by sound, progressive, economic development. By improvement in industrial methods and by increased use of capital, production gains over population. As efficiency, initiative, and self-restraint are more generally developed, distribution increases and broadens. As these changes come, labor receives a relatively larger share of the fruits of its toil. The more productive the industries are made, the better will be all conditions of life for the masses of the people, and the more favorable for the development of that equality in individual capacity which must be the basis of industrial democracy. As men approach equality in productive ability, equality of rewards will naturally follow.

The gains of society in recent years have been accomplished, for the most part, by improvements in the method of production through the use of power and machinery. They have been accomplished by the development of the industrial plant, and the industrial plant represents the earnings, savings, and profits of individuals. These private earnings and savings have lifted the whole level of social life far above what it was before capital became an important factor in production.

We have the regime of privately conducted industry, but these private properties engaged in production are none the less a part of the equipment of society. They are doing the same work, rendering the same service, as though they were owned by the state,

and probably doing it more effectively than it could be done by the state.

The people who advocate government ownership and operation of the railroads and other industries do so upon the theory that there would be an escape from paying profits on the operations. But aside from the question of efficiency in the operations, they overlook the fact that if there were no profits, if nothing was left over after paying expenses, there would be no fund for the improvement or development or enlargement of the industries, and therefore no industrial progress. An amount of new capital equal to all the net earnings of the railroads of the United States must be invested in these industries annually in order to keep them up to the growing needs of the country.

If we had the socialist state, all of this industrial equipment, all of this capital, would have to be provided in some manner and reserved from consumption, as it is now. Instead of dividing and consuming all that is produced, something must be reserved from current production to increase production in the future.

Some good people believe that too much has been reserved from distribution in the past, but how does anybody know that the condition of the wage-earning class would be better to-day if more had been divided in wages and less had been devoted to the development of industry in the past? "One cannot eat his cake and have it too." The industrial development of this country has been accomplished by means of the profits made in industry in the past; if the profits had been less the industrial development would have been less, and the evils of scarcity and high prices would have been greater.

A certain amount of new capital must always be available for investment, to keep the industries of the

country up to the wants of the population. If it is not forthcoming, industry will fall behind, improvements will not be made, production will fail to keep pace with population, prices will rise, and wages will lose in purchasing power. If too much of current production, on the other hand, is put into equipment and not enough is distributed for current consumption, the purchasing power of the people will fall behind production and further investments will be unprofitable. There would be a state of depression in industry, profitable to nobody.

The master principle governing the distribution of wealth is found in the fact that capital cannot practically be used productively except by employing labor in the service of the masses of the people. The faster capital is accumulated, the greater is the demand for labor, the more rapid the development of industry, and the larger the stream of goods flowing to the public market.

In all progressive countries capital under normal conditions increases faster than population, faster than the labor supply. Under these conditions labor comes naturally into a constantly stronger position.

Every new fortune, every dollar of new capital saved, goes forth to work as a producer, to multiply the things the world wants. If things multiply faster than people, what must be the inevitable tendency?

If employers are not forced by labor conditions to distribute profits immediately in higher wages, the distribution must come later, and with interest. If one does not get his full share, his children will have more in consequence. If the profits of capital for a period are unduly large, the additions thus made to capital will create unusual demands upon the labor market and exert a corresponding influence upon wages.

The industrial organization as it exists today in America is subject to the play and the influence of new ideas from all possible sources. Every branch of industry is changing constantly in free development. For the young executive especially, the opportunities were never so numerous or the rewards so great, if he can make a contribution to industrial progress. The sole condition placed upon his innovation is that in practice it must increase and not diminish the industrial product. To this test all theories for the reorganization of industry are brought. No class can be benefited by any change which reduces the sum to be divided.

Industrial society is a growing concern upon which the population depends for its daily bread. Any improvements upon it must be made while it continues in action. It must be rebuilt as a bridge is rebuilt, by replacing each bolt and stringer singly, while traffic moves without interruption.

But in these troubled times the whole system of industry and fabric of society are threatened with disorganization. The theory of the day seems to be that each industry belongs to the particular people in it, without regard to the interests of the rest of the community. This theory, instead of drawing society together and teaching a harmony of interests, divides it up into water-tight compartments, into warring groups and classes whose interests will be in conflict. It would be disruptive of society. The remedy for all this is education in sound economic principles.

Nobody has made society what it is by any plan. It has come to be what it is by development, a process of growth, constantly changing with the needs of society and with the development of the people. Always it tends

to become more complex and highly organized—more interdependent.

When I was a boy living on a farm in eastern Iowa I used to go to a grist-mill with father. I remember how I strolled along the stream and played about the mill dam all day until the grist was ground. Then we took home the flour made from the identical wheat that we had taken to the mill. I remember with what pride I went to the village shoe shop to be measured for my first pair of boots. Each community in those times—even more so in times preceding—was much more self-contained and more independent of the world outside than it is now. Today we have all become specialists. We sell our products in a general market and buy in a general market. The exchanges do not take place face to face.

With the development of machinery and the use of power, capital has become an increasing factor in industry. At the same time industry has become concentrated. Thousands of people have become wage-earners and work for an employer. No longer do they work direct for the consumer as did the old village shoemaker who made for me that first pair of boots.

This tendency, whatever may be its faults, is unavoidable. The old methods of industry cannot support the present population of the United States and Europe. But while development in administrative methods and developments in machinery are necessary, it is also necessary that there shall be development in individual intelligence and in comprehension and understanding of this modern system of industry.

I sometimes wonder whether the development has not exceeded the comprehension of the people. Have we not developed a machine that is not really understood by the great body of the workers?

If a man does everything for himself,

he knows that the harder he works the more he will have and that no danger of overproduction exists so long as he has wants unsatisfied. If he trades work with a neighbor, he has the whole process in view. But if he works for an employer who sells the product on the market, the relationship with other workers and with other consumers is lost sight of, although the principle remains the same. He does not look beyond his employer. He gets, therefore, suspicious and antagonistic. The result is that a large part of the efficiency of the system is lost in friction. It is as though a brake was applied on the machine somewhere, as though the belts were slipping and failing to transmit the power.

There obtains a failure to see that modern industry, as I have already mentioned in this article, is essentially co-operative. Workers in a shoe factory are making shoes for the workers in all the other industries; workers in the cotton-mills are making cloth for all the other workers; workers in the fields are growing food for all the other people; workers on the railroads are carrying these necessities back and forth in the process of exchange.

Because workers are exchanging work with each other, they all owe loyalty and honest, fair dealing to one another. In effect one man gives so many hours of work in the cotton-mill or in the shoe factory for so many hours of work in a grain field; each owes this fair dealing to the other. This same fair dealing is the basis for peace between industrial groups, as between nations. Nobody should ask what is unfair, or insist upon being the sole judge of his own case.

In conclusion, I am coming to the conclusion that the leaders and managers of American industry, the men who by reason of their abilities hold the positions of power and influence in the

community, must accept a greater responsibility for the common welfare than they have felt in the past. If they want society to develop a common outlook and spirit, they must exert themselves to that end. They must show that spirit themselves. They must show themselves outside the circle of their own private interests and identify themselves with the common interests. They must help give that direction and supervision to community interests which are so much needed.

This responsibility they must take whether they like it or not. Whatever goes wrong with society for want of intelligent guidance and affects the living conditions of the people unfavorably, reacts upon business. The average man does not think very deeply or reflect very profoundly about causes; he judges mainly by visible results. The leaders of industry and society must produce results. It is up to them to show the common man how to be efficient, to make him prosperous, and to satisfy him that he has a stake in the country. It is squarely up to them to win the confidence of the masses. Success may not be easy, but in all fields the ability to overcome obstacles is one of the conditions of leadership.

The man who cannot measure up to the requirements simply fails as a leader.

To inspire men to work with hearty spirit, there must be the hope and the prospect of improving conditions. If the necessities of life are growing dearer, if employment is more irregular, if the conditions of life grow harder, if the outlook for the children is no better, there will be discontent. Rightly or wrongly the leaders of affairs, who appear to have power in their hands, will be held responsible. A perpetual contest is bound to exist between the leaders and organizers of society on the one hand, and the critics and agitators on the other—a contest in which the constructive forces are always winning although always harassed.

They win because they alone can produce results; but they will win more surely and more easily if they recognize this responsibility to produce results. They must beat the radical agitator to it, to use a bit of the language of the street, by keeping ahead of his power for mischief. They must find a way to make it clear to the common man that his interest is one with theirs; that orderly, efficient, uninterrupted industry will bring him better results than turmoil and confusion.

BASIC PRINCIPLES OF STORES ORGANIZATION

BY L. F. BOFFEY*

THE storeroom of the manufacturing plant procures from outside sources, through intermediary channels, sustenance for the entire organization. It must be competent and also prepared to increase or decrease its normal rate of consumption in proportion to the activity of other functioning parts of the organization. If the supply it receives is inadequate, the operations of dependent parts are weakened; if the supply is overabundant, its own functioning powers are reduced to a low rate of efficiency. In all manufacturing plants the aggregate value of raw products and finished parts awaiting final assembly represents a proportionately large investment. Substantially, such materials are stores. It is trite to assert that they should be safeguarded as carefully and completely as is cash in the average establishment. Possibly the triteness of the illustration causes its lack of acknowledgment, or, at least, lack of observance, by many plant administrators.

Elementary though it may be, the consideration of stores as equivalent to money is the first principle in establishing a proper stores organization. From this recognition of value is derived the necessity for definite limits of investment, adequate records, and a satisfactory control of distribution.

If it were possible to fix manufacturing and purchasing schedules to insure the arrival of material in the exact quantity required at the precise moment of need, then the stores department would have no place in the organization; space, equipment, and labor

would not be apportioned to stores, and large investments in material for future needs would be avoided. But practical conditions of prices, supply, productive continuity, and deliveries make the stores department a necessity, and its cost of maintenance is negligible as compared with the tremendous losses which would follow disregard of these practical considerations.

Upon the stores department rests the responsibility of supplying the production departments with the essential and incidental materials to maintain the productive schedule. To fulfil this purpose a close relation must exist with the purchasing department, in order to insure that price and supply are properly considered in establishing and replenishing the quantities for stores; and there must exist an equally close relation with the production departments, so that curtailed or increased production or changes in design may immediately be offset by a revision of quantity limitations.

A moot point in plant administration concerns the advisability of placing the stores department under the control of the purchasing agent. Extensive discussion of this point is impossible within the limits of this article, but a conclusion may be recorded. It is now generally recognized that an efficiently administered purchasing department is a source of considerable saving. It should be as fully recognized that the planning, control, and distribution of stores is an executive function of equal importance. To entrust this responsibility to a subordinate whose acts and recommendations are only casually supervised by

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the purchasing agent, is to invite waste and prodigality and to put a premium on the more or less common practice of pilfering by factory employees.

A cursory glance at inventory values should convince the most skeptical plant manager of the need for proper safeguarding of stores. Add to this factor the necessity for intelligence, foresight, and perception in solving the complex problems of procuring and maintaining stores, and the task is clearly one for which brains and not brawn should be the primary requisite.

The stores department requires keen, constant, and undivided supervision. This responsibility should be entrusted to a competent department executive, ranking on a par with the purchasing agent and other department heads, and subject to the same administrative control. The principle of co-ordination and not of subordination should govern the relation of stores with other plant departments.

Naturally, the size and extent of manufacturing operations will regulate the size of the stores department. But the general purpose of stores control is the same for the small plant as for the large. Only the methods of control will differ.

To function properly, whether it takes the time of two men or two hundred, the stores department must assume responsibility on four general points:

First, the establishment of limits for the stock on hand of a given item is the foundation for the entire structure of stores. It is clear that both purchasing and production counsel must be considered in fixing the limits; but elaboration of this point is for the moment unnecessary. Regardless of the cause or the individual to blame, when stores fall below the minimum

limit the stores department is not properly functioning.

Second, the actual receipt, storage, and disbursement of stores must be considered. On these points such factors as location and accessibility have their bearing, with varying degrees of importance, but the fundamental consideration is that stores must be available for the demands of the production departments.

The third point is the maintenance of complete records of receipts and disbursements. In effect, the stores department is analogous to the receiving and paying departments of a bank, except that it deals with different commodities of value, and its records of incoming and outgoing materials should be scrupulously exact.

Fourth, as the resources of a financial institution are periodically inspected and audited, so should stores be inventoried. Systematic checking of stores on hand with the records will determine losses and errors and enable them to be corrected, thereby establishing the figurative solvency of the department.

Each of the foregoing fundamentals applies not only to general stores, as the main division of supply is sometimes termed, but to other forms of stores which may be maintained in the organization. It often is a good practice to establish separate storerooms for stationery, tools, spare parts, and finished product, but the basis of operation should be the same in each. All these subdivisions should come under the control of the stores executive. Each room may require the supervision of a qualified stores foreman, but all these should be answerable to one general head. Whether this general head be termed "general stores-keeper" or "supervisor of stores" is immaterial. The important purpose to be achieved is the centralization of all stores, with

the ensuing benefit of centralized records, viz., a uniform policy for the control of raw, finished, and auxiliary materials, and undivided responsibility and authority for stores operation.

In stores terminology the word "minimum" establishes the limit below which stocks on hand must not be allowed to fall; and the antithetic term "maximum" defines the limit which may be carried in stores at any time.

Although these terms are in common use in manufacturing circles, they are frequently misconstrued and misapplied. In many plants the "minimum" is considered as the "ordering point." That is, when stocks on hand reach the low point a requisition is made on the purchasing department for replenishment. From this practice ensue most of the worries of the purchasing department, in being called upon to achieve overnight a delivery which might normally require two months.

Minimum limits should be scientifically established. The main purpose in fixing the minimum of each stock commodity should be to provide a reserve which can be drawn upon in case of emergency. In effect, the stores below the established minimum should be a factor of safety, sufficient for the production of a given number of units or to insure continuity of manufacturing for a definite period of time. The falling of any stores item below the minimum point should be a danger signal, justifying emergency purchase methods to insure replacement. Once established, the minimum should be revised only to conform with changes in the production schedule.

What is frequently referred to as the maximum point should really be termed the normal limit of stores. From the stores viewpoint, the two factors to be considered in establishing a normal limit are the needs of the production departments and the period required

for delivery from outside sources. The fixing of these limits naturally entails close co-operation with the purchasing and manufacturing divisions.

The normal limit of stores should be the ordering point; the minimum limit should be the delivery point. On this basis, if precise calculations were possible, the stores department would authorize replenishment through the purchasing department when stores were normal, and the delivery following this authorization would be made when the previously calculated demands of the production departments had drawn out stores to the minimum point. In practice, of course, this plan can be only approximated; but the closer the approximation, the more efficient is the functioning of the stores organization. Naturally, too, the normal limit must be closely watched and periodically revised to conform with changes in market conditions and production plans.

The true maximum limit concerns the stores department mainly from the viewpoint of space which can be given over to the storage of more than the normal limit. The most important factor which will govern the establishment of maximum limits is a purchasing fundamental. Space being available for storage, the question resolves itself into one of expediency—whether or not it is ultimate economy to buy a larger quantity than designated by the normal limit to obtain advantages in price or delivery.

Within the limitations set for this article it is possible to treat only in a sketchy or outline way of the second fundamental of stores organization, the receipt, storage, and disbursement principles. It is good practice to have the main storeroom located as near as possible to the receiving room, so as to avoid unnecessary handling of goods. It is equally good practice to have the

storeroom so located that it is convenient and accessible to the departments calling for stores. In large plants a series of floor or departmental storerooms, connected to the main storeroom by conveyors, dumb-waiters and other labor-saving facilities, will provide the most economical method of stores distribution.

The points which must be observed for effective results are these: Incoming goods must be handled expeditiously; a careful inspection and verification must be made of the goods; and the goods must be put in the proper location in stores, to await disbursement as required. Essential records are embodied in this routine, but for the moment they need not be considered.

Adequate receiving space must be allowed; also proper equipment in the form of bins, shelving, racks, and lifting and conveying apparatus must be provided. The extent and layout of this equipment is an individual problem, but a point for general consideration is accessibility. Size, weight, classification, and frequency of demand are the factors which should govern the precise location of each item of stores, so that undue time and effort need not be wasted in filling the requisitions of the production departments.

Orderliness is essential in the storeroom. Aisles cluttered with materials awaiting disposal in bins, boxes stacked up at the receiving point, racks containing a miscellaneous array of materials—these are features of careless handling and improper administration which reveal a slipshod foundation for the stores organization. A place should be provided for every item in stores and every item should be in its place.

This is incidental to proper disbursement. Order and regulation within

the storeroom will make it possible to handle quickly and in businesslike fashion the messengers from production departments seeking material. Lack of orderliness will provoke delays, loitering on the part of storeroom helpers and outside workers, and general disorganization in the disbursement process.

Adequate records, of course, are an important feature of stores control. The main record, which is the basis of all stores accounting, is the stores ledger or perpetual inventory. Before discussing this, however, the auxiliary records should be sequentially mentioned, and these in turn are preceded by two features of stores control which have a decided bearing upon adequate records.

First, there is the need of a standard designation or symbol for each item in stores. Unless this is done it will be found that there are as many different terms used for a given article as there are requisitioning authorities in the plant. It is not a simple task to list and symbolize or otherwise define from one to ten thousand items, depending on the variety of stores carried, but it is a task well worth the effort expended. The lists, in the forms of blue-prints or printed sheets, should be in the hands of all departments having occasion to requisition stores. For the guidance of the stores department, all purchase orders and receiving slips should show the symbol or standard definition of the article ordered or received.

Second, all bins, racks, shelves or receptacles in the storeroom should be plainly labeled in some fashion with the designation of the material each is presumed to contain. Metal labels are procurable in comparatively inexpensive form and are to be preferred to paper labels, because of added durability. Naturally, in storing mate-

rials, the system of grouping items having similar characteristics in adjacent receptacles is recommended. One or more plans of the storeroom, showing the aisle, section, and bin for any given item, should be posted for the convenient reference of the receiving and disbursement clerks.

All material entering stores, whether goods from outside sources, finished or repair parts from the factory, or unused stores returned for credit, should be received at one point. The receipt should be acknowledged in the manner provided by the general system of plant operation, but this should invariably include a duplicate acknowledgment to be sent to the individual in charge of the stores ledger. It may be assumed that the material has

passed inspection for quality, although this inspection devolves upon the stores department in some instances where the expense of a special inspection department is not justified. The count or weight should be verified, and the material immediately placed in its proper location or compartment.

In disbursing material, the fundamental rule should be to allow nothing to leave stores without proper authority for the disbursement. *Verbal requests for stores should be given no more consideration than a bank teller would give to a verbal demand for cash.* A requisition, dated and signed by a competent authority, giving the proper designation and quantity of the material wanted and specifying the shop order or purpose for which the material is

DUPLICATE	
DATE.....	
<u>FACTORY REQUISITION</u>	
ORIGINAL	
DATE.....	
<u>FACTORY REQUISITION</u>	
KINDLY FURNISH.....DEPT.	
.....	
.....	
.....	
.....	
.....	
ABOVE RECEIVED O. K.	
SIGNED.....	SIGNED.....
DATE.....	

TYPICAL DESIGN OF REQUISITION FORM

withdrawn from stores, should form the basis of each disbursement. The requisition should then go to the stores ledger clerk for entry.

The receiving and disbursement forms described are basic in character. The precise arrangement of each form is a matter for individual decision, governed by the complete routine of the plant. Each form may bear supplementary information for the guidance of the cost or accounting departments, but this opens up a channel of discussion which could not be compressed within the limits of this article. The illustration of a requisition form presumes merely to show a typical design.

Between the receipt and the disbursement of material the stores department may be required to issue supplementary records, but that is again an adjunct of the basic principles of stores organization not to be considered in this article. One intermediate form in more or less general use may be briefly considered. That is the bin ticket, attached to each receptacle and designed to show receipts, disbursements, and balance on hand.

Theoretically, the bin ticket serves a definite purpose. In practice, it falls far short of that purpose. The men who perform manual work in the storeroom are not dependable in even the simplest accounting task. Consequently, entries on bin tickets are slurred, overlooked, improperly posted, and in general unreliable. At best, the bin ticket is merely a check on the official record of stores, the perpetual inventory, and its defects in practice are so great that it can fittingly be dispensed with in most organizations. As a substitute, "something just as good," is recommended a method of stacking items in rows of uniform number which will permit a quick

approximation of the quantity in each bin.

In substance, the perpetual inventory of stores is a ledger record in its simplest form. Debit entries of goods received are made from the acknowledgments of receipts sent from the storeroom, and credit entries of goods disbursed are made from the requisitions for stores. The balance on hand of any item is ascertainable from this record; a typical design of which is shown in the illustration.

While modifications will prevail according to the general system in use, the basic information given by the record should be as follows: (a) description or standard designation of article; (b) location in storeroom; (c) minimum, normal, and maximum limits. The body of the form should be ruled for entries showing orders placed by the purchasing department and the stores receipts and disbursements.

It may be necessary and advisable to include a record of prices on this form, and by means of supplementary reports to advise the cost department of fluctuations in value.

Careful and scrupulous attention to the stock records is essential for the proper control of stores. If accurately maintained, the records will show the exact quantity in stores of a given item, the rate of consumption between given dates, and the value of any or all items carried in stores; and will govern the placing of new orders when and as necessary.

While the perpetual inventory will not do away with periodical checking of stocks on hand, it can and should obviate the tedious and usually inaccurate form of physical inventory which necessitates shutting down a plant for a week or more. Stores must be checked against the record in the same manner that cash is verified. Shortages, depreciation, and evaporation

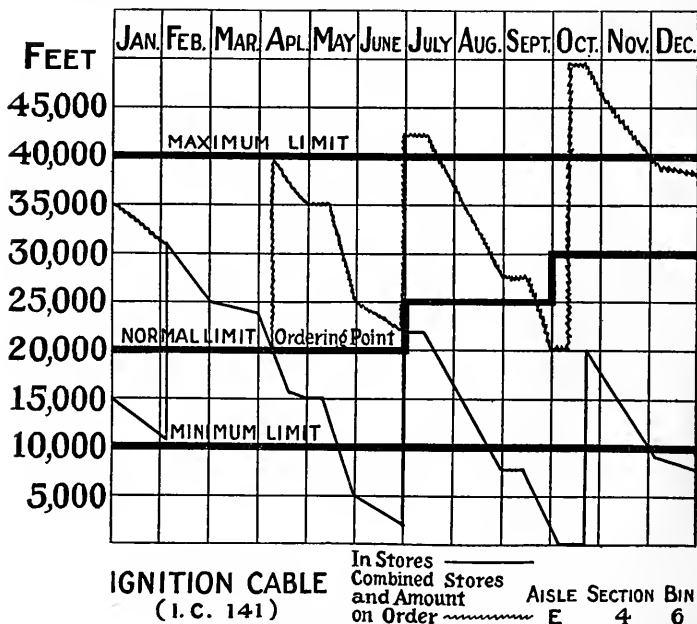
must be accounted for and the necessary adjustments made on the record. The more frequently this is done, the more accurate will be the record. It is good practice to maintain a system of daily verification of some of the items in stores, on a scale which will permit every item to be checked at least four times a year. An alternative plan is to check each item when the ordering point is reached.

Theoretically, the placing of new orders with the purchasing department when the proper stock limit is reached should be almost automatic if the perpetual inventory is properly maintained. Into this, however, the human equation enters and it is more or less common for all stores departments to

allow important stores to dwindle below the ordering point. Particularly is this true if records are not frequently balanced, or if the requisitions from which postings are made are allowed to accumulate without attention.

As an offset to this tendency, the use of graphic charts is recommended. It will hardly prove feasible to maintain graphs for every item in stores, but for important and essential commodities the extra effort will prove well worth while.

To describe in detail the use of charts and graphs in the organization and control of stores would make a special article. The present article limits itself to the basic principles of store organization.



TYPICAL GRAPHIC CHART

BUSINESS AND THE DEPRECIATED DOLLAR

BY EDWIN WALTER KEMMERER*

I

IF the United States gold dollar of 1913 should be considered a 100 per cent dollar in its purchasing power over commodities at wholesale, the gold dollar of August 1920 would have been a 40 per cent dollar, and that of 1896 a 150 per cent dollar. Stated in another way, in its command over goods at wholesale, the dollar of August 1920 was equivalent to 40 cents of the dollar of 1913, and to 27 cents of the dollar of 1896. The average annual rate of depreciation (measured geometrically) of the United States dollar was 15 per cent from July 1914 to July 1920, and 5.3 per cent for the entire period from July 1896 to July 1920.

If we pass from the value of the dollar as expressed in its purchasing power over commodities at wholesale to the value of the dollar as expressed in its purchasing power over commodities at retail, we find a similar story, although unfortunately the statistical evidence concerning the movement of retail prices is nothing like so comprehensive as that concerning wholesale prices. If we should consider the dollar of 1913 a 100 per cent dollar in its purchasing power over food at retail (that is over 22 articles of food weighted according to their estimated importance in a typical family budget), the dollar of July 1920 would have been a 46 per cent dollar and the dollar of 1896 (having its value computed on the basis of the prices of 15 principal articles of food) would have been ap-

proximately a 172 per cent dollar. In its command over food at retail, the dollar of July 1920 was equivalent to about 27 cents of the dollar of 1896.

The United States Bureau of Labor Statistics (upon whose price index numbers the above comparisons are made) has collected data from 18 industrial centers in the United States showing the increase in the cost of living for typical laboring men's families from December 1914 to June 1920. For the 18 cities the percentage increase in the cost of living from December 1914 to June 1920 ranges from 96 in San Francisco to 136 in Detroit. The average increase for all the cities was 113 per cent, and in only 6 of the 18 cities was the rate of increase less than 110 per cent. If, therefore, we should call the dollar of December 1914 a 100 per cent dollar in its purchasing power over the things that enter into a typical family budget in 18 cities, the dollar of June 1920 would have been a 47 per cent dollar.

During the last few months there have been pronounced recessions in wholesale prices and more moderate ones in retail prices. Although the price declines in some lines—as silks, cotton and woollen goods, and leather goods—have been large, the general decline has so far taken up but a small percentage of the 1913-1920 advance.

For nearly every important class of expenditure, the dollar of today is a very much less valuable dollar than was the dollar of 1913, while the dollar of 1913 was a much less valuable dollar

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than had been the dollar of 1896, the year when the cost of living began its long upward move. There is one important exception to this rule, an exception whose significance can hardly be overestimated at the present time. That exception is the debt-paying value of the present depreciated dollar. This dollar is just as valuable to pay old debts with as was the dollar of 1913 or the dollar of 1896. With all its depreciation in purchasing power over goods at wholesale, goods at retail, wages, rents, etc., it has not lost one iota of its debt-paying power; and that is true regardless of the time the debt was contracted, whether a few days ago, a few months ago, or many years ago.

While the dollar has been depreciating, interest rates have been rising, and second only to the depreciation of the dollar, this great rise in interest rates since pre-war days is the most significant economic fact in the present financial situation. A general idea of what has happened to interest rates since 1913 may be obtained from the following table. The figures given are average figures for the third quarter of each calendar year.

Period July, Aug., Sept. (3rd quarter)	Call rates of interest, New York Stock Exchange, average	Rates on 60-90 days two-name prime com- mercial paper	Rates of yield on ten selected railroad bonds
1913	2.47	5.95	4.42
1914	4.97	5.45	4.28
1915	1.81	3.36	4.57
1916	2.75	3.70	4.38
1917	3.66	4.91	4.73
1918	5.64	5.91	5.29
1919	5.94	5.39	5.31
1920	7.44	7.94	5.91

Some United States government obligations are today yielding as high as 6 per cent, England's public debt is paying in the neighborhood of 7 per cent, Switzerland's is paying about 8 per cent, and those of France and

Belgium between 8 per cent and 9 per cent.

These pronounced advances in interest rates are due largely to the great destruction of capital and the slow creation of new capital during the war period. They are also due in part to the artificial stimulus given to the demand for capital by a rising price level, and to the fact that during a period of rising prices interest rates are forced upwards to compensate creditors in part for the losses due to their being paid back their interest and ultimately their principal in dollars of less purchasing power than the ones they loaned.

Interest rates during the war period were prevented from advancing as rapidly as they otherwise would have advanced by the heavy currency and deposit credit inflation of those years. War-time interest rates were rates camouflaged by a progressive inflation. More nearly true market rates, however, have since asserted themselves and the rates of today are very much higher—for some kinds of obligations about twice as high—as they were before the war.

The facts concerning the depreciation of the dollar and the rise in interest rates since 1913 are too familiar to require further discussion. It is with their influence on income and capital that the business man is primarily concerned; and also with the effects upon income and capital of the probable movement of prices and interest rates during the years of readjustment immediately ahead. To these topics let us now turn, first considering the influences of a depreciating dollar on various kinds of income and then upon capital.

Funded incomes have been hard hit by the depreciation of the dollar, and a very large proportion of them have been more than cut in half. The in-

terest on all long-time bonds dating from pre-war time has been more than cut in half. The \$50 a year interest received in 1920 on a 5 per cent bond issued in 1912, and redeemable say in 1937, has less than half the purchasing power that this same interest had in 1913. Of the "dividend yield" on savings banks' deposits most of which are paying the same or approximately the same rate today that they paid in 1913, the same may be said. At the beginning of the war the deposits of our mutual savings banks alone amounted to approximately \$4,000,000,000, which at an assumed average annual rate of dividends of $3\frac{1}{2}$ per cent would represent an annual income of \$140,000,000. To the extent to which that money is still on deposit—and probably a large proportion of it is—it is yielding the depositor only about half the purchasing-power income per dollar of deposit that it yielded him in 1913. In like manner the yield, measured in purchasing power, of pre-war investments in preferred stocks has been cut down. The same is true of annuities and pensions whose amounts were fixed prior to the war. In all these cases the recipient obtains the same, or practically the same, number of dollars as before, but the dollars are less than half as valuable.

Wages and salaries are another form of income to be considered in connection with the depreciated dollar. On the subject of wages the following two paragraphs, slightly adapted from the writer's recent book on "High Prices and Deflation,"¹ give a general description of the situation.

We have as yet no very comprehensive figures for wage movements throughout the country for the period since 1913, and such figures as are available for different kinds of labor, and even for the same kind in different

localities, show widely different results. Of course it is well known that wages in certain industries for whose products the war demand was great, and also all classes of wages in centers of great war industrial activities, rose rapidly and often to extravagant heights; it is likewise true that the wages in certain other industries rose very slightly.

Contrast the case of the powder-mill worker and the public school teacher; that of the mechanic in the ship-building center and of the street-car conductor in the interior town, removed from any great war industry. Regardless of what figures, yet to be prepared, may show as to what happened to that much talked about but rather indefinite thing we call "average wage" since 1913, there is no question at all but that many laborers received wage increases far in excess of the rise in the cost of living—increases that have found expression in all sorts of much heralded extravagances—and that on the other hand, the wages of many millions of workers have not begun to increase as rapidly as their cost of living—a fact that has shown itself in great and wide-spread hardships. Generally speaking, the pay of government officials and clerks has not begun to keep pace with the rise in the cost of living; and the government service, civil and military, is suffering as a result. The salary situation among teachers, both in public schools and colleges, has become notoriously bad and our whole American educational program is jeopardized. Public schools are closing for lack of teachers and college faculties are also suffering losses in their teaching staff.

The industrial survey recently conducted by the United States Bureau of Labor Statistics covered eight industries. For these eight industries, respectively, the average percentage

¹ Reviewed in this issue by Prof. Willard C. Fisher.

wage increases were as follows: cigars, 52; men's clothing, 71; furniture, 54; hosiery and underwear, 84; iron and steel, 121; lumber, 94; millwork, 51; and silk goods, 91. For the period covered by these figures the average increase in the cost of living for laboring men's families as computed by the Bureau of Labor Statistics for a number of cities was 83.1 per cent.

From this it will be seen that the average rate of wage increase in three of the eight industries was greater than the increase in the cost of living—in one of them, namely, that of iron and steel, very much greater—and that in four of the industries it was less than the cost of living. In two of the latter, namely, cigars and millwork, it was very much less. In one of the industries the wage increase was practically the same as the increase in the cost of living. Of course as economic conditions improve wages must rise relatively to the cost of living if labor is fairly to participate in the country's economic progress. So far the wage adjustment to the new price level has been very incomplete and very uneven. The adjustment to a new and stable equilibrium will require many wage changes, some upward and some downward.

II

Having considered the effect of a depreciating dollar upon funded incomes and upon wages and salaries, let us consider briefly the effect upon proprietor's profits.

A period of monetary depreciation is usually one of increasing incomes for proprietors. Prices of products that are being manufactured and marketed in most cases rise more rapidly than do the expenses of their production. At such times we have a sellers' market, competition among buyers to purchase

being much stronger than competition among sellers to sell. Prices of finished products rise between the time the raw materials are purchased and the time the finished product is sold. Sellers, therefore, dominate the market and are exceedingly independent of buyers, since on a rising market profits are frequently greatly increased by delays in marketing. Hoarding goods becomes profitable.

At such times many concerns find it profitable to order raw materials, extensively, in advance of the making of contracts for the sale of their products. Wages commonly lag behind prices on the upward move, and the salaries of officers and of the clerical staff lag well behind wages. Rentals, being usually fixed for a considerable period of time, do not often rise as quickly as do the prices of the goods being ammanufactured and sold. Charges paid for services purchased from industries whose rates are regulated by the government, such as railroads, telegraph and telephone companies, and concerns furnishing gas and electricity, rarely advance anything like as rapidly as does the general price level or the great majority of the individual prices from which the general price level is derived. At a time of a rapidly rising price level industries in general benefit at the expense of railroads and other public utilities.

Probably the most important single source of increasing proprietors' incomes during a period of a rapidly depreciating dollar is the fixity in terms of dollars of interest charges on debts with distant maturities. Interest charges fixed for terms of years do not increase as prices rise. Hence the proprietor, which of course means in most cases the stockholder, profits at the expense of the creditor, namely, the mortgagee or the bondholder. The point may be made clear by adapting to recent conditions a simple, hypothet-

ical illustration used a couple of years before the war by Professor Harry G. Brown.

His assumption is as follows:

A certain business (a corporation) has had invested in it \$100,000,000. Of this total, \$75,000,000 has been contributed by bondholders at 5 per cent, who are therefore creditors for that amount. The other \$25,000,000 has been contributed by stockholders.

Let us assume that before the dollar began to depreciate this concern's annual expenses for labor, materials, depreciation of plant, and taxes were \$25,000,000, its gross income \$30,000,000 and its net profits \$5,000,000. This \$5,000,000 of net profit represents 5 per cent on the total investment, both of stocks and bonds, and each class of investors receives 5 per cent on its investment. Bondholders receive \$3,750,000 a year interest and stockholders \$1,250,000 a year dividends.

Suppose now that general prices advance for a period of five years at the rate the government's index numbers for wholesale prices show them to have advanced for the five-year period ending with April 1920, namely, from an index number of 100 to one of 265, which would be an average annual rate of increase (measured geometrically) of approximately 22 per cent. If prices rise on an average 22 per cent a year, the dollar depreciates in its purchasing power about 18 per cent a year.

If the prices of the commodities this particular manufacturing concern produces had risen at the same rate as the general price level, assuming also that the concern sold the same amount of physical products during the year ending April 30, 1920, that it sold during the year ending April 30, 1915, and if its expenses for labor, materials, depreciation, and taxes (exclusive of excess profits taxes) had risen in exactly the same proportion as the

general price level, namely, 22 per cent a year, the situation at the end of the five years would have been approximately as follows: The total products sold for the concern's fiscal year 1920 would have been \$30,000,000 multiplied by 2.65, or \$79,500,000, the gross expense (exclusive of excess profits taxes) would have been \$25,000,000 multiplied by 2.65 or \$66,250,000, and the profits out of which interest and dividends would be paid would have been \$13,250,000. But these dollars as compared with the dollar of April, 1915, would have been in their purchasing power only 38 per cent dollars (exactly 37.73 per cent). None the less the corporation would have paid in interest on its bonds in 1920 the same number of dollars it paid in 1915, that is, \$3,750,000. The balance of the profits, were there no excess profits tax, would all have gone to the stockholders. Their profits on this basis would have amounted to \$9,500,000 a year, yielding a dividend on the \$25,000,000 capital originally paid in of 38 per cent, or nearly 8 times the 5 per cent rate originally paid. An increase of 165 per cent over the \$1,250,000 paid annually in dividends before the rise in prices took place, namely, an increase to \$3,312,500, representing an annual rate of $13\frac{1}{4}$ per cent, would have been sufficient to compensate the stockholder for the depreciation of the dollar. The much larger amount that he receives is at the expense of the bondholders. Had there been no bonds, the entire \$100,000,000 investment having been originally in stock, the net income of \$13,250,000 would have been equivalent to $13\frac{1}{4}$ per cent on the total investment and this amount would have had exactly the same purchasing power as the profits of \$5,000,000, representing 5 per cent of the capital, had five years previously.

Proprietors of concerns whose capital was largely obtained by the sale of bonds prior to the war have in general had their incomes greatly increased through the depreciation of the dollar. Of the resulting large profits to proprietors the government has taken a substantial percentage during recent years in the form of excess profits taxes, under the stress of the war-created needs for increased government revenue. Even after deducting excess profits taxes of \$1,880,000 a year in the case of the corporation referred to in the above illustration, the stockholders would have realized a net profit of \$7,620,000 for the year, which would represent a rate of $30\frac{1}{2}$ per cent on their investment. Allowing for the fact that the dollars of 1920 had only about 38 per cent of the purchasing power of those of 1915, the rate of net profit expressed in purchasing power would have been 11.6 per cent a year. Bondholders in turn would have realized a rate of interest measured in purchasing power of only 1.9 per cent, namely, \$3,750,000 (38 per cent dollars) on an investment of \$75,000,000 (100 per cent dollars).

In practice the stockholders would often realize a larger net income in a case like the above than that shown in the illustration, for in the illustration there was assumed a condition previously shown to be usually contrary to fact, namely, that costs of materials, wages, rents, and all other expenses of production increased proportionately with the prices of the products the concern was manufacturing.

The situation described in considerable detail for the sake of clearness in the illustration would obviously have been little changed if the \$75,000,000 had been provided by the sale of preferred stocks, with a fixed rate of return, instead of by the sale of bonds.

III

Let us now pass from the influence of a depreciating dollar on income to its influence on capital.

As the dollar depreciates, values expressed in dollars of a business concern's plant and supplies tend to rise. Prices of different kinds of capital equipment may rise at widely different rates, but sooner or later all advance to the new level of prices represented by the depreciated dollar, the different kinds of supplies and equipment ultimately bearing essentially the same price relationships to each other that they would have borne had there been no depreciation of the dollar. A new price equilibrium is reached. The transition period, however, is often a long one, and during that period there are many maladjustments. A manufacturing plant worth \$100,000,000, of the dollars of 1915 which we have called 100 per cent dollars, would normally be expected to be worth approximately \$265,000,000 of the depreciated 38 per cent dollars of 1920, when price readjustments should have been completed. This would not represent any increase in the value of the concern's property but would be merely an expression of the old value in terms of a new unit—a unit representing the same amount of standard gold as before, but embodying a very different value.

But while the value of the concern's property itself would not be permanently increased in terms of goods in general by the depreciation of the dollar, the stockholder's equity in the concern would be greatly enhanced in value.

This will be seen by reverting to our previous illustration. If the net income of the concern should have increased in five years exactly in proportion to the increase in the price level, namely, 165 per cent, it would have

amounted to \$13,250,000 instead of the \$5,000,000 of five years before. If these profits were to give promise of continuing indefinitely, and if the market rate of interest on investments of that degree of safety continued to be 5 per cent, then the value of the concern as an income bearer would be \$265,000,000 (of the new dollars), because a permanent annual income of \$13,250,000 capitalized at 5 per cent would be equivalent to a capital of \$265,000,000. If there were no bonds, all the equities in the concern being owned by the holders of common stock, the position of the stockholders as the owners of the capital would be unchanged. Their \$265,000,000 concern, in terms of other things than the depreciated dollar, would be actually worth no more and no less than was their \$100,000,000 concern of five years ago.

But the situation would be entirely different if three-fourths of the original capital had been furnished by bondholders and one-fourth by stockholders, as assumed in the illustration. The property of the concern would still be worth \$265,000,000 (new dollars), but while the equities of the bondholders would be unchanged at \$75,000,000, those of the stockholders would have risen from \$25,000,000 (old dollars) to \$190,000,000 (new dollars). An increase of 165 per cent would have been sufficient to compensate for the depreciation of the dollar and this increase, had it gone to both stockholder and bondholder alike, would have given the former an equity of \$66,250,000 and the latter one of \$198,750,000. But inasmuch as the bondholder's contract is for a fixed number of dollars at the maturity of his bonds, he can get back at maturity no more of the new 38 per cent dollars than he originally lent of the 100 per cent dollars. The stockholder is not only compensated for the depreciation of all the dollars he in-

vested, but he receives also the entire amount needed to compensate the bondholder for the depreciation of his dollar, a compensation which the bondholder is precluded by the nature of his contract from obtaining. The stockholders' equity in the concern thus becomes \$190,000,000 and (assuming the market rate of interest unchanged) the stock which we have assumed to have been worth par in 1915 would now have a book value and presumably a market value of \$760 a share. Deducting the entire excess profits tax the value would be \$609.60 a share. Had the value increased merely in proportion to the depreciation of the dollar the stock would have been worth only \$265 a share. The difference, or \$344.60 per share, is taken from the bondholders and given to the stockholders by the depreciating dollar.

To make the point clear we have assumed in the illustration a rather extreme case. Most concerns do not have such a large ratio of bonds to stock. The principle shown in the illustration, however, is of general application and it is that with which we are here concerned.

It should be noted in passing that the financial condition of the concern would have been much strengthened by the depreciation of the dollar. Its interest charges and debt lien would represent a greatly reduced relative burden, and the bonds presumably would have an improved standing in the market.

In all that has been said so far, it has been assumed that the market rate of interest remained unchanged at 5 per cent. This is an assumption contrary to fact. During a period of continually rising prices interest rates, it has been shown, normally rise. Price advances stimulate the demand for capital, while creditors, seeing the prospects of having their loans repaid in a

dollar of lower purchasing power than that of the dollar they are lending, are increasingly reluctant to lend. The result is that interest rates rise. This advance in interest rates would not affect the interest charges against the concern on its bonds of distant maturity. New flotations, however, despite the concern's improved credit position, would presumably have to be made at higher interest rates, and the market prices of existing bonds would probably be depressed by the higher market rate of interest. The capital value of the concern, moreover, would be somewhat reduced from what it would otherwise be by the fact that the capital value would be computed by capitalizing income at a higher market interest rate than before.

IV

So much for the influence of a depreciating dollar on income and on capital. The dollar has now begun to appreciate; prices are rapidly falling. What of the future?

There are strong reasons for believing that we are confronted with a substantial period of falling prices and falling interest rates. Let us consider each of these points briefly.

During the war the withdrawal of millions of men from productive industry to enter the army and navy, the readjustment of industry to produce the maximum quantity of war supplies, the tremendous destruction of economic goods in the waging of the war, and the depreciation of much capital equipment through failure to maintain customary repairs and replacements, all together resulted in an economic productivity that was far below what would have existed in times of peace. The physical quantities of goods produced in the more active belligerent countries of Europe probably greatly

declined, while a large and increasing proportion of those produced were blown to pieces or otherwise used up in the business of war. According to the writer's estimates, the average annual rate of increase in the production of physical products, namely, tons, gallons, yards, etc., in the United States for the seventeen years 1896 to 1913 was 4.7 per cent, and for the six years 1913 to 1919, only 1.5 per cent.

With the discontinuance of the war and the transference of the world's economic energy back to the pursuits of peace, the world's economic productivity may be expected to increase rapidly. There is good reason for believing that labor is regaining its pre-war efficiency. Of course there will be reactions and temporary depressions in the rising curve of economic productivity, and some painful readjustments may be necessary, but on the whole, after a brief period of readjustment, the curve of economic productivity may be expected to resume its pre-war upward tendency, at least in North America.

At the same time our highly inflated currencies and highly inflated bank deposit credit must contract. From 1913 to 1919 the writer estimates the growth of the physical volume of business in the United States to have been 9.6 per cent, that of money in circulation 71 per cent, and that of bank deposits in commercial banks 120 per cent. During the same period legal reserve requirements of banks in the federal reserve system were reduced to about one-fifth of what they were prior to the war, and actual reserves have been very greatly reduced. The establishment of our federal reserve system made our currency and deposit credit vastly more efficient—in other words, enabled a given amount to do much more work than before. The United States continued on the gold standard,

but most of the leading countries of the world expanded their currencies and their bank credit so far in relation to their gold reserves that they were compelled to give up entirely the gold standard and to go over to depreciated paper money bases.

This has been true of England, France, Italy, Belgium, Germany, Austria-Hungary, Russia and many other countries. All these countries want to get back ultimately to a gold basis, and England expects to do so at an early date. In fact she must do so if London is to maintain her position as the world's money-market center, a position which means much to the people of Great Britain. The world has not anything like sufficient gold to maintain on a gold basis present inflated currencies and bank credits. Even the United States, though on a gold basis and possessing by far the largest supplies of gold of any country in the world, could not with any degree of safety and public confidence get along permanently with its present low percentages of gold reserve to paper currency and bank deposits.

As the European countries recover, however, from the war's destructive work, and as they one by one return to the gold standard, England probably returning first, they will demand for some time an increasing proportion of the world's gold. In other words, the United States must expect to hold a much smaller percentage of the world's supply of monetary gold in the future than it is holding today. It has had a net loss of \$261,000,000 from January 1, 1919, to October 31, 1920.

General prices, then, must fall for some time, because production will increase and because worldwide deflation must take place if the gold standard is to be restored in the leading countries of the world and placed upon a firm basis. A declining price level brings

with it declining interest rates, just as a rising price level carries in its train rising interest rates. This conclusion is supported both by economic theory and economic history. When prices are falling and when the prospects are that they will continue to fall for some time, business men are reluctant to invest heavily in new enterprises or to undertake extensive capital improvements in existing plants. They are reluctant to capitalize high prices when economic forces are promising for the near future lower prices both for the capital equipment they need and for the products they have to sell. This reluctance tends to lessen the demand for capital, and, unless its influence is offset by other forces, pushes down market interest rates.

The influence of a decline in market interest rates at such a time, in stimulating demand for capital, is weakened by the fact that under the guise of declining market interest rates there exist very high real or economic interest rates, namely, interest rates expressed in purchasing power. For example, a one-year loan calling for \$1,000 at 6 per cent, made at a price level represented by a price index number of 100 and repaid principal and interest at maturity when the price level has declined, say to 90, would be paying an interest rate measured in purchasing power of approximately 17.8 per cent, for the principal would be paid back in dollars 11.1 per cent more valuable than the ones loaned, and likewise the 6 per cent interest (except to the extent that the prospect of falling prices at the time the loan was made might have reduced the interest rate charged). The fact, therefore, that long-time loans made at a time of prospectively falling prices will presumably be paid, interest and principal, in dollars of greater purchasing power than the ones lent, makes bor-

rowers less willing to borrow and lenders more willing to lend. The market becomes a borrowers' market as contrasted with the lenders' market that exists when the price level is rising, and this depresses interest rates. They are rarely depressed, however, at such times, sufficiently to compensate for the increased purchasing power of the dollar.

During the long period of falling prices from 1873 to about 1896 that gave rise to the great bimetallic controversy of the last century, market interest rates on long-time obligations were tending downward.

Falling prices and falling interest rates will tend to reverse the conditions described in the forepart of this article as existing at a time of a rapidly depreciating dollar. As the dollar appreciates, the market changes from a sellers' market to a buyers' market. Apparent scarcity of goods suddenly changes to apparent redundancy. Manufacturers, wholesalers, jobbers, and retailers instead of ordering supplies in advance of needs and hoarding goods for a rise in prices, reduce their orders and even cancel outstanding ones when possible, and try to unload their supplies before prices fall. Banks become more cautious about their loans for the carrying of goods, and demand more collateral. The consumer goes on a strike for lower prices.

But many expenses of production do not fall proportionately with prices. The expenses that lagged behind prices on the upward move, now also lag behind them on the downward move. Rents cannot be promptly reduced; wage reductions are difficult, except through the intermediation of a substantial amount of unemployment that weakens the bargaining power of organized labor; prices for the services of public utilities, such as railroads, telegraph and telephone companies, and

gas and electric companies, not only do not fall, but are quite likely to rise under concessions belatedly made by public regulating bodies in response to needs for rate increases that appeared at the time the price level was rising. All this cuts into proprietors' incomes.

Borrowed funds on long-time contracts, which under the regime of rapidly advancing prices yielded such extraordinary profits to proprietors, now turn to plague them. No matter how much prices fall, interest obligations on indebtedness must be met without reduction if the concern is to maintain its solvency; and this is true although the dollar being paid to the bondholder may increase in purchasing power far beyond that of the dollar originally loaned, and although dividends may have to be greatly reduced or passed entirely, and perhaps even capital be greatly impaired. The receiver of interest gains at the expense of the receiver of dividends.

Falling profits reduce the market value of the concern's property as expressed in the market value of its outstanding stock. The number of dollars of the bondholders' lien on the property remains unchanged, but the dollar represents a continually increasing value. The bondholders' equity in the concern accordingly increases while that of the stockholders decreases. The fact that the interest rate on the concern's bonds remains constant while the market rate of interest declines tends to push up the market price of the bonds while that of the stock declines. The weakening of the concern's financial position as the result of the above conditions may, however, have a depressing influence on the price of the bonds that will equal or exceed the upward push exerted by the falling market rate of interest.

Of course the larger a concern's indebtedness on long maturities, in

proportion to its capital, the more it will suffer when the dollar is appreciating. Many concerns, however, with large bonded indebtedness, have protected themselves by setting aside in open or hidden surpluses a substantial part of the extraordinary profits realized while prices were rising, to meet the extraordinary losses they foresaw were likely to occur when prices should decline. Concerns that were conservative in their financial policy during the period of rising prices will, to a large degree, be prepared for the period of price decline. Those that distributed their earnings recklessly at that time must expect to "pay the fiddler" now.

If the foregoing diagnosis is true its message for the business man should be clear. Now is the time to play safe. Capital extensions and improvements for the time being should not be made by private concerns unless they are

urgently needed. Financing should be done mainly, if possible, on short maturities. Debts that can be paid now should be paid, before the dollar becomes more valuable. Stocks of raw materials and merchandise should not be accumulated except for the needs of the very near future. Attempts to unload existing stocks of merchandise at prices based on the high costs of a past period instead of reducing them to the bases of present replacement costs are likely to prove fatal. Someone will almost certainly cut under. Those who benefited by the depreciating dollar should promptly face such losses as the appreciating dollar must bring to them. An orderly but reasonably prompt readjustment to the lower price level required in the interest of a sound gold standard currency and of economic stability and progress is the urgent need of the immediate future.

SPECIAL STATISTICS AS MARKETING AIDS

BY MALCOLM C. RORTY*

THE demand for one commodity—so it frequently happens—is an excellent index to the demand for another with which it is not in any way directly connected. An investigation of this class of economic phenomena by business statisticians will throw great light on the marketing possibilities in different territorial areas.

For example, when one can find a farm with a well-painted home and barn, it is a safe conclusion that the owner will also want a telephone.

The compilation of statistics of

paint consumption by counties would therefore indicate the most promising markets for telephones. The communities which seem to have little use for paint could be left for later consideration.

It is not necessary, however, to rely wholly upon statistics of consumption. There are various facts regarding communities, available in the census reports and elsewhere, which have a direct bearing on purchasing power.

One of the most significant indexes of this kind is the ratio of children in high school to total children of school age for the different territorial areas.

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AMERICAN AND EUROPEAN BUSINESS METHODS

BY DWIGHT T. FARNHAM*

IN America exists a tendency for each millionaire to improvise his own executive and business methods as he piles up his million. Thereafter this material proof of his success remains a monument to the correctness of the said methods and a personal tribute to their author. Of course it is quite possible that he might have made two millions if he had adopted other methods—but such thoughts are disturbing—a man shouldn't be a hog anyway, he reasons, and a million ought to be weighty enough proof of success for any practical man.

Abroad—in France, Italy, Germany, and England—business methods are more in accordance with precedents developed under centuries of business negotiation. Trading with countries widely different in race, customs, and morals has made an exact method of procedure necessary. Words must be more carefully chosen and consideration must be given to the effect of each sentence upon the mind of the hearer when his historical and national environment is taken into consideration. In England the word "bloody" is so awful a term that all London gasped when an actor dared to utter it on the stage, and the next daring author who attempted to interject it into a play was promptly suppressed by the censor.

A college friend of mine informed a group of German schoolgirls that "he guessed he was the goat" and it was only after they had been shoo'd to safety by a horrified chaperon that he realized he had announced that he

was a particularly loathsome and unmentionable sort of roué.

Last summer in Paris, an American, famous from coast to coast for his "heart to heart" talks, embarrassed the interpreter almost to tears by what the British chairman referred to as "his picturesque Americanisms" and it required the combined efforts of all the British, French, and Americans present to devise a French phrase which would convey to the Belgian, Italian, and French delegates, the meaning of "a hot box."

The head of a great university spent a quarter of an hour, as we walked up and down his garden after tea, telling me exactly what happened in the mind of a serious Englishman, athirst for knowledge, when he opened an American textbook and found such a ribald expression as "any foreman who would treat a man that way, ought to have a brick bounced off his bean."

An Englishman returning recently from America complained in *The London Times* that the famous Americans, authors and the like, whom he had met were uninteresting conversationalists because they described all their experiences in slang stock phrases; they either all "worked like hell" or things "hurt like the devil" and everybody he met talked just the same way.

The first time I came into contact with English business men to any extent, I was seriously embarrassed to find how frequently just such stock phrases came to my lips. I was continually censoring myself and enduring all the embarrassment a cowboy might undergo who tried to talk like a college instructor in English poetry. The

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English business man—and the same is true in France, Italy, and Germany—says exactly what he means, selecting the word which will convey the exact shade of meaning desired with almost as great care as that displayed by a lawyer drawing up a contract.

The European business man has a much better idea of the effect his words will have upon the hearer, and of what the recoil will be, than has the American business man. If the desired effect is not produced the first time, another attempt is made and so on until the range is reached. In case of a miss there is always another prospect just as good.

The difference is similar to that between a hunter armed with a twelve-shot automatic in a forest where game is plentiful and a man armed with a duelling pistol, for which he must exactly weigh out powder and shot, alone with a single deer on a desert island.

A number of years ago an executive made a trip into Canada to renew some important agency contracts. Two days later he returned sweating blood and wiping his brow at the nearness with which disaster had overtaken him.

"I thought I'd throw a scare into them at the start by telling them all the rotten things they'd done to us this last year, and then make a grab for better terms before they came to. But I'm d—— if they didn't think we wanted to quit doing business with them and it took me two days to bind up their wounds and get 'em where we had 'em before."

Recently the head of one of our largest banks told me that thirty years' experience with American business men had convinced him that our greatest fault is our failure to think our problems clear through.

"We think them through to a certain point," he said, "and then jump

to a conclusion. Such procedure is responsible for a large percentage of our business disasters."

Last fall I traveled from Manchester to London on a luncheon train. The journey took about three hours and during that time the men who occupied the table across the car from me were preparing for certain business negotiations to take place the next day. They first wrote down on a piece of paper the points they wished to make. Then they discussed these points to the last detail and made notations of the more important. They then considered what the other parties to the proposed deal would be likely to say and devised ways and means of meeting every possible move. After that they discussed the strategy of the thing—the order of presentation most likely to produce the effect they themselves desired. Next they reviewed the whole thing, and finally the man who was to be spokesman gave an oral rehearsal of what he was going to say to be sure that he was letter-perfect and in order that the other men might criticize him.

I have prepared for a good many business deals but I have never before encountered such thorough preparation as these men went through. Under the circumstances, failure seemed almost out of the question.

An interesting episode of this trip illustrates another characteristic of European business life. About an hour after the consultation began the train passed through the most beautiful section of the Peak district. Instead of casting an eye out of the window now and then and interpolating an occasional remark about the scenery into the business conversation—which would have resulted neither in full enjoyment of the rocky glens nor of complete attention to the business in hand—one of the Englishmen said, "Sup-

pose we look out of the window for a few minutes."

They were silent for fifteen minutes. Then after their rest period they gave their work their undivided consideration.

Salesmen going into Canada for the first time often return with stories of how they "got in bad" with their customers by attempting to talk business during luncheon or dinner. The custom of inviting a man out to lunch and then making him use his brain while he consumes your food is probably one of the most reprehensible habits of American business usage. It is not only an insulting form of bribery, since it implies that he is willing to sacrifice his backers' interests to a paltry donation of food, but it is inefficient since he either enjoys and digests the food by giving scant heed to your proposition, or else he uses his brain during the meal and later functions at loss of power during the attack of indigestion which inevitably follows intense concentration of the mind upon business during a meal.

No time is saved by doing business during a meal and then running at half speed all the afternoon. We are a nation of dyspeptics and a northern European at sixty looks little if any older than the usual American of forty-five; and luncheon conferences are responsible for a large part of our distress. Whenever one begins to think that one must work while one eats to become a Napoleon of finance, it is well to reflect that an attack of indigestion lost Waterloo.

Americans are somewhat prone to laugh at the Englishman's office hours—10 to 1 and 2:30 to 4:30 or 5:00—and at his week-ends in the country. And how we smile at the idea of afternoon tea ever being introduced into our own virile, masculine, American offices! While the waistband is still

intact, it is well, however, to restrain the machinations sufficiently to reflect on the ribaldry the wrist watch produced before some millions of husky Americans acquired the habit.

When the Curtis Publishing Company serves its employees with four o'clock tea it is about as safe to regard the habit as feminine as it would be to address the next fifty men you meet wearing wrist watches as "sissy."

Americans are learning fast but have not yet learned to specialize in the employment of time. We are prone to demand admiration because we pretend to begin work at eight-thirty or nine and stay in our offices until half-past five, with a business conference for lunch. If we do not believe an Englishman concentrates harder on his work while he works, or on his play when he plays, we should try to talk sport to him during working hours or to talk business to him while he eats. He uses the appointment system to the fullest possible extent.

If one wants to see a man of any consequence anywhere abroad one must either write to him or phone the secretary. One is then told when to come and at the beginning of the talk learns the hour of his next appointment. If business is not completed in the time allotted, a second appointment is arranged. There is no stimulant to the omission of irrelevant details, equal to the knowledge that in exactly twenty minutes the next man will arrive.

Week-ends in the country are not all pheasant shooting, golf, and light conversation in the baronial hall. Unless one arrives with a secretary loaded with dispatch cases one will probably be lonely. At dinner one sees all the guests in the house, but if one has not letters to write, reports to prepare, or conferences to hold in one's room, one finds the baronial hall empty most of

the time. Week-ends abroad are an opportunity to do clear thinking free from interruption, not a round of hectic entertainment which sends one back to town, hating the hostess only a little less than the work piled up.

In France the morning hours are variously used by business men. Some men arrive early at their offices. One can generally count, however, on finding them in from about ten until a little before twelve. Luncheon is taken very seriously; the business man generally goes home to his family and follows the meal with a siesta, as was long the custom of the Rockefeller associates, or with a walk in the garden. By two-thirty one will begin to find men in their offices again and one can count on doing business until seven o'clock.

At first this is rather hard on the American business man, who has been compelled to substitute a Continental breakfast for his regular ham and eggs with a stack of wheats and who hasn't yet accustomed himself to beginning lunch with a couple of pounds of *hors d'oeuvres*. Business talk of a highly concentrated sort, flavored with the sauce of strange surroundings and the chance of misunderstanding due to different mental processes, is a pretty poor substitute for food.

The present German system of mixing food and work resisted my most earnest attempts at solution. When we drove out to the Country Club on Sundays, my friend the *Kommerzienrat* carried a small paper suitcase filled with sandwiches of various sorts. At intervals he or one of the children would remark, "Well, I think I could eat something," whereupon the suitcase would be opened and all who so desired could put away a small portion of cheese, or ham encased in brown bread.

Wherever we went—by motor,

launch, rowboat or on foot—the paper suitcase always accompanied us. When I went through a factory very often no one would think to eat from seven o'clock, when I had a very Continental breakfast at the Adlon, until along about five in the afternoon when we would be driven in desperation to some big restaurant on Unter den Linden and would there gorge ourselves until our eyes bulged from their sockets. The office force seemed to have a very appetizing meal in dining-rooms attached to the works somewhere around noon, and we generally inspected the kitchens about the time our belts were drawn up to the last hole. The working hours of directors and high-class business men seemed to follow those of the English very closely.

The personal efficiency of the German executive is exceedingly high and military discipline is the key-note of his staff. He is more likely to go in for art or music as a recreation, however, than for golf, so that he loses his shape as rapidly if not sooner than we do. Perhaps the highest example of personal efficiency to be encountered in Germany is that of Herr Direktor Hirschberg of the Allgemeinen Electricitats Gesellschaft. This company, somewhat like our General Electric, employs over a hundred thousand men. The Herr Direktor, whom one sees only on appointment and after the presentation of eminent credentials, occupies a room perhaps thirty feet square. He is most cordial and shows one the standard form upon which all reports come to his desk. When a report has been digested he notes his orders in the space provided and drops it through a slot in the top of the desk which leads to the room below, which is filled with the various secretaries trained to do his bidding. If certain points are to be taken up with his lieutenants the report is placed in the

proper basket located in the right-hand leg of his desk, and at a certain scheduled hour in the afternoon a department head arrives and a conclusion is reached, after which the report goes down the chute in the usual manner.

The perusal of these reports requires concentrated attention on the part of the Herr Direktor that the most advantageous decision may be reached. This means no interruptions. When he desires isolation Herr Hirschberg touches a single button and presto, all doors are automatically locked, and lest some incautious neophyte might rattle a door handle or turn in a phone call, a red light is displayed outside each door and on the operator's switchboard. In dire disaster or a momentous crisis in some department, it is possible to drop a ticket, colored in accordance with the department in peril, into a glass box near the door. This informs the Direktor that his attention is desired, although not demanded, upon matters pertaining to that department and allows him to use his own judgment whether he shall remove his attention from the business in which he is immersed.

When the German executive gives orders to his subordinates, the assistant does not lean against the wall, or puff at a cigarette, or say "Huh?" when the director gets through. He doesn't even say, "Wouldn't it be well to consider, sir, doing it in this way instead—?" The subordinate, even should he be of very high rank himself, stands with his toes out and his heels together, with an invisible ramrod down his back and his eyes fixed on his chief's face with an expression of the most intense intelligent attention.

When the chief's orders have been rapped out—one word after another like bullets from an automatic—he says, "*Ja wohl, Mein Herr,*" makes a quarter

turn left and marches from the room.

After one has seen the German apprentice schools, with every youngster frozen solid to attention, one knows that that assistant went out and split up the chief's orders and communicated them to seven or eight of his subordinates, who stood to attention and after in turn saying, "*Ja wohl, Mein Herr,*" passed on the word to their subordinates until almost before the splash made by the orders of the big chief had subsided in the center of that great lake of an organization the little ripples were lapping up on the distant shores and things were being done without question as the murmurs of, "*Ja wohl, Mein Herr,*" died out among the far boundaries of the industry.

Military discipline is great stuff for getting things done, but one must be careful what kind of rock one heaves if one is the boss.

In the same type of industry in France, paternalism is the note. French business is founded upon this and upon making certainty sure. People new to this insistence upon conducting business in such a way that no doubt exists about exactly what was done during each step of the transaction, and new to the demand for proof of character and stability before negotiation, rashly conclude that the French are so dishonest and so suspicious by nature that they refuse to do business with each other or with an outsider without documentary proof to the n'th degree.

One disgusted business man with whom I foregathered at a small table in front of the Cafe de la Paix, even went so far as to insist that the vanished red trousers of the poilu had been converted into tape to confuse visiting Americans.

The French business man takes no chances. If one rents an apartment it is specified that the apartment when

the lease expires shall be returned exactly as found. The tack driven in the wall must be removed and the hole filled up. If one paper the drawing-room with pink cupids one must remove said cupids and replace the dingy brown paper one found there, no matter how much more desirable pink cupids may seem, because, Monsieur reasons, the family of old maids or the curé who follows as tenant may not care to have *la vie d'amour* continually and insistently called to their attention. This is reasonable and logical, and the French are nothing if not logical.

To experience French safeguards in their pristine glory, one should open an account in a French bank. As soon as one has learned to pronounce its name clearly enough so that the taxi-driver will take one there instead of to the railroad station, enter the marble portals and accost any of the elegant bemedalled functionaries who gesticulate in the shade of a magnificent onyx column.

During the polite silence which immediately follows, one's nationality is diagnosed with the result that the most junior dignitary present is dispatched to "*Cherchez Henri.*"

Presently Henri arrives and addresses one in a cockney accent acquired while driving a truck in Whitechapel, thus fitting himself to act in his present interpreto-financial capacity.

One is then politely conducted to *la salle* which looks like the waiting-room of the old Kansas City railroad station except that it has counters along the sides. Henri shows one how to fill out a blank requesting information of a most surprising nature, and eventually you exchange it for a number printed upon a pink slip of paper.

Then you find out why *la salle* looks like the waiting-room of the Kansas City station. For the subsequent half-hour Henri entertains one with his ex-

periences during the war and philosophizes upon human nature and the characteristics of nations. He then informs you that the bearded gentleman who has been giving an imitation of an old-time train announcer is approaching one's number. One moves up to a window, and after a lengthy conversation with another bearded gentleman with a ribbon in the button-hole of his frock coat, Henri ventures the information that in 'about three days one may call and secure a check book with one's name printed on each check, and that thereafter this signature will be honored as long as *le bureau central* is convinced that one has money on deposit.

In about three days one returns, Henri is again *cherchez'd*, and upon presentation of the signature one receives another pink slip, occupies *la salle* for half an hour, and when one's number is called one gets an elegant embossed check book about as big as a cedar shingle with one's name, carefully translated into French, printed on each check.

One then requests a ruling from *le bureau central* whether one must write one's name in French. Eventually one is granted permission to retranslate one's name into English each time one draws money.

At last one is ready to write the first check. It takes about half an hour each time to draw the money, but the system is absolutely tight. No one can get another's money and one can not get any of the bank's money. *Le bureau central* is backed with complete information and nothing is left to the memory of Charley, the paying teller. Consequently no one has to pay for the mistakes which cost money under the American system and which eventually are charged to the bank's customers.

A visit to a factory in France is as much of a ceremony. I desired to see

La Creusot, the principal plant of the Schneider Company, which employs something over a hundred thousand men and makes everything from electric motors and automobiles to big guns and battleships.

I therefore looked up 43 Rue d'Anjou on the map and told the taxi-driver to drive to La Madaleine, which I happened to know how to pronounce. After walking a few blocks, I saw an immense gray stone building with a mansard roof. In a marble hallway at the end of a Turkey red carpet stood a huge shell which glittered in the dusk. In a hallway to the left sat a grizzled concierge, resplendent in gold lace and medals. To him I presented my letter of introduction to Monsieur Eugene Schneider. This resulted in elaborate directions amid which I detected the mention of the third *etage* which bitter previous experience had taught me was the fourth floor. I climbed three flights of stairs and after the requisite number of turns encountered another gold-laced functionary who directed me to a room very much like one of our board-rooms, except that the walls were lined with books and the table equipped with photograph albums.

In a short time, however, a venerable man with a long brown beard and a shabby frock coat entered, shook me by the hand, and addressed me in French. From his clothes I might have taken him for an ancient retainer and slipped him a franc, but a glance at the broad brow and the features worthy of Leonardo da Vinci convinced me I stood before one of the greatest men in France.

After a few words I was invited to attend a special cinematograph exhibition. For two hours we sat with a secretary and half a dozen heads of departments and saw battleships launched, great guns in action on the Somme front, machine shops in opera-

tion, and various sorts of welfare work carried on at the plant.

At the end of the show I was invited to attend a second exhibition the next afternoon. At the end of this performance I was turned over to Monsieur de Freminville, who has charge of all the industrial engineering work in the Schneider establishments.

Along about seven o'clock I was informed that if the War Department were favorably inclined I would receive a letter about Saturday. On that morning there arrived by post a formal invitation to proceed to La Creusot by the fourteen o'clock Sunday train and to put myself in the hands of the chauffeur who would meet me at the station.

About twenty-two o'clock the local on the little branch line from Chaguy drew up at La Creusot and I descended from the once elegant but now dilapidated and blood-stained first-class carriage and was saluted by a blue-uniformed individual standing in the shadow of a large red limousine. We whirled at once up steep, stone-paved streets, past roaring blast furnaces, to the gates which guard the wing of Monsieur Schneider's chateau reserved for guests. Here were more red carpets, gold lace, and salutes.

After traversing long corridors lined with English sporting prints and pictures of Monsieur Schneider and the Shah of Persia, of Monsieur Schneider and the King of Spain and of Monsieur Schneider and the President of France, I was assigned to a sleeping apartment, a private dining-room and was turned over to certain skilled servitors who would make the most polite head waiter at the best New York hotel look like a rough-neck biscuit shooter in a Barbary Coast beanery. I was also presented with a map and photographs of the town, and of the factories, hospitals, etc.

At eight o'clock Monday morning there was a clanging of gates, the whirr of a motor, and amid low bows on the part of the staff there arrived the Director in Charge of Receptions with his retainers. He is one of the most splendid gentlemen I have ever encountered. No one would ever be tempted to slip him a franc—military carriage, carefully waxed blonde mustache, monocle, red ribbon in immaculate buttonhole, ivory-headed cane dangling on a wrist strap, and a train of secretaries with portfolios in the rear.

After certain highly gratifying exchanges of compliments we went into executive session. An interpreter and a limousine were assigned to me and a schedule was worked out. At such an hour the superintendent of the locomotive shops would receive us, at such an hour we should be at the steel plant. One o'clock on Monday the chief engineer of the A group of plants would lunch with me and on Tuesday the chief engineer of the B group. On Tuesday afternoon we would inspect the hospitals and later the old-folk's home and the schools. And as it was written, so it transpired.

We drove furiously from plant to plant. Gates in the stone walls flew open at our approach, bemedalled veterans saluted us as we entered, and superintendents rode on to the next plant with us so that we might complete our conversations. The whole thing is typical of the French method of doing business—first be sure you are right, make every possible preparation, and then carry out the whole thing as per schedule at terrific speed. *Verve* is the only word that expresses the French in action, and once one has experienced it, one ceases to wonder why the Germans failed to get to Paris.

The high-class Italian business man is the most charming gentleman in Europe. As a rule of splendid phy-

sique, he dresses in the utmost good taste and speaks purer American than any other European. For the most part, however, he is somewhat new to business as it is done in America, large mergers and immense industrial units being the developments of the last few years in Italy. But he is anxious to learn and his interest in American business systems and in American office devices is at times almost touching.

While he, like the Frenchman, is a Latin, the Italian is to the business man of France what the charming southern gentleman of the old school is to the strenuous inhabitant of our industrial North. He is astute enough, but in matters of organization and of performance as per carefully thought out schedule, his climate makes him so much of a gentleman that he sometimes scorns to connect—when connection means “undignified hurry” of “pushing commercialism.” With his workmen the Italian's manner is somewhat that of the Grand Seigneur.

I went to Italy as a member of a commercial mission of twelve. We were guests of certain national Italian commercial organizations and of the Italian government. We traveled in high-powered motor cars and special trains and were shown so much of industrial Italy in two weeks that we averaged only about four hours sleep per night. The Governor of the Province with a delegation of distinguished business men received us in the royal red-carpeted waiting-room regardless of the hour at which we arrived in each provincial capitol. We had a grand fiesta at Venice and we were banqueted at the Lido, at Porto Fino and the Villa d'Est. Restrictions as to the consumption of cakes were loosened for our benefit and motors brought princesses and rare collations to remote industrial districts so that we

might lunch amid historic settings with all the delights which reach their most perfect flower in an old and a high civilization. Considering the ambitious nature of the program, the short time for preparation, and the difficulties to be encountered in a country only just rewon from the conqueror and even then in the throes of serious labor troubles, it was remarkable that the only contretemps were those due to a desire to show us too much territory or to accede to the most inconsequential whim expressed by any member of the party.

Where an Anglo-Saxon will shove one into the first car at hand and call out, "Come on, get started folks!" the Italian will stand bowing and interpolating, "*Gratzia*," and, "As the Signor desires," for thirty minutes and then run one through every village at fifty miles an hour and around every corner on two wheels to make up for lost time. The result is about the same, but the Italian method is more picturesque.

As in the case of the French but to a more marked degree, great adroitness and marvelous dexterity at high speed replace the careful planning and the plodding by calculated advance of the Teutonic business man. Vivacity and gay vociferousness must not be mistaken for lack of common sense by the Anglo-Saxon worshipper of strong, silent men. Neither does versatility mean vacuity. A certain Italian gentleman of our party could not only

keep a banquet table in roars of laughter, discourse learnedly upon the relative merits of Botticelli and Michael Angelo, race a train down the station platform with his arms full of bottles, drive an aeroplane, or tango with the ladies down the corridor of a special train at midnight, but he could diagnose the psychology of his market for building material and personally direct construction work so skilfully that he was able, though hardly thirty, not only to support his family but to own motor cars, art treasures, and country villas.

America is now a world power with a mercantile marine. We must do business abroad increasingly as the years pass. To do this we must understand the foreign business man and his methods. The art of negotiation is not a game for amateurs. Provincialism must give way to finesse. We must learn French. We must learn to say exactly what we mean. We must replace good intentions and a weakness for aphoristic ideals with a knowledge of racial psychology and historic likes and dislikes. We can't afford to hate foreigners because they do not understand us.

"*Je suis Americaine*" must cease to be a preliminary to ingenious *gaucherie* and must become the sign of the man who thinks and functions with the suavity and diplomacy of the citizen of the world. And the first step is the study of the business and industrial methods of our European allies.

RELATION OF CAPITAL STOCK TO INVESTED CAPITAL

BY MILTON RINDLER*

THE effect of the present excess profits tax upon business organization and finance cannot be too strongly emphasized. A business which may adopt either the partnership or the corporate form of organization cannot overlook the tax question before deciding upon which form is the better. If a corporate form of organization is chosen, full consideration must be given to the effect of tax in the financing of the new company. In the past a lack of knowledge of tax has led to mistakes in organization and finance which have cost corporations thousands of dollars.

Under state laws it is not very difficult to issue stock far in excess of the value of the property received therefor, but under the excess profits tax law it is not taken for granted that the directors have fixed the actual value of the property for which stock has been issued. In the determination of invested capital, the tax law uses the amount of capital stock issued and outstanding as a starting point. This amount is adjusted by additions and deductions in accordance with the statute, the purpose being to determine as closely as possible the actual investment of the stockholders.

The excess profits tax blank allows for the separation of the capital stock outstanding into the two main classes—common and preferred. It is sometimes a very difficult matter to distinguish between preferred stock and bonds. From a tax viewpoint, the distinction is of vital importance be-

cause the stock represents invested capital whereas the bonds do not. One case in particular comes to mind, in which the corporation could, just as conveniently and with the same effect, have issued a certain form of preferred stock instead of the bonds which were issued. The difference was approximately \$100,000 in tax.

The name of the security is by no means conclusive evidence of its nature. A certain form of debenture bond is called "debenture stock." The term "debenture," in this country, indicates that the investment assumes in part both the proprietorship and the creditorship relation, the latter dominating.

Several cases involving the bond and stock distinction have been brought before the Committee of Appeals for decision. In one case, a corporation issued preferred stock, convertible at the holder's election into first mortgage bonds of the same date. The bonds were to be issued only in exchange for the preferred stock. It was held that the preferred stock was invested capital until converted into bonds.¹ In a second case, a corporation was organized to take over the assets of a partnership. Common stock was issued to the former partnership for the intangible assets, and debenture bonds, payable in thirty years and bearing 6% interest, were issued for the tangible assets. The stock and the bonds were issued to the partners in the same ratio. The bond agreement provided that at all times during their term, the bonds should be subject to all rights of creditors of the corporation.

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¹ Cumulative Bulletin, 1919, page 274.

Later all the bonds were exchanged for preferred stock. The Committee decided that the bonds could not be recognized as invested capital up to the time that they became preferred stock by conversion.²

A third case involved the question of whether an issue of debenture stock was to be considered as preferred stock or debenture bonds. The debenture stock was issued pursuant to the provision in the corporation's charter for borrowing money by the issue of an obligation to be known as debenture stock. The stock certificate acknowledged the corporation's indebtedness to the holder for the principal, payable at the end of the corporation's existence; interest at a definite rate was to be paid semiannually. The stock was subordinated to the claims of all creditors but ranked prior to the capital stock. It was also subject to redemption on any interest date upon a two-thirds vote of the capital stock. Property could not be mortgaged without the consent of the holders of two-thirds of the debenture stock. Upon consideration of all these facts, it was held that the debenture stock constituted debenture bonds or borrowed money and could not be included in invested capital.³

From the rulings in each of these cases, the following general distinctions may be inferred:

Debenture Bonds

1. Issued pursuant to charter authorization to borrow money.
2. Bond agreement evidences a debt of the corporation and the holder ranks as a general creditor. As a creditor, he is entitled only to repayment of the principal of the debt at maturity.
3. Holder ordinarily has no voice in the management or control of the corporation.
4. Interest at a definite rate and principal

are payable at fixed dates. Holder can sue upon default in payment of interest or principal.

Preferred Stock

1. Issued only up to amount of capital stock authorized by charter. Additional issue must be authorized by state.
2. Stock certificate evidences a proprietary interest in the corporation and the holder is ordinarily entitled to share in the surplus remaining at dissolution. Payment of the principal is subordinated to the interests of general creditors.
3. Holder, although restricted in voting, may have voice in the management at certain times.
4. Dividend payments and principal return are indefinite and uncertain. Holders cannot sue for dividend unless declared.

These principles indicate only the general characteristics of debenture bonds and preferred stock, and cannot be applied specifically to special cases. In certain individual cases, such as the third case cited above, the investment partakes of the features of both bond and stock. The decision in such cases lies with the side which has the preponderance of these determining features.

Bond agreements may contain provision for their exchange at a future date for preferred stock. The preferred stock issued in this exchange may be included in invested capital in the amount for which the bonds were originally sold.⁴

In practically every corporation, at least part of the capital stock is issued for cash. The law, of course, allows the inclusion in invested capital of "actual cash bona fide paid in for stock."⁵

"The proceeds from the original sale by a corporation of its shares of capital stock whether such proceeds are in excess of or less than the par value of the

² Bulletin 21-20-962.

³ Bulletin 33-20-1142.

⁴ Cumulative Bulletin, 1919, page 283, Ruling 24-19-577.

⁵ Section 326 (a-1).

stock issued, constitute the capital of the company."⁶ Consequently, when stock is issued at a discount or at a premium, the par value of the stock is disregarded and only the net amount of cash or property received is recognized as invested capital. If issued for less than par, the discount is deducted in Schedule G of the return from the par value shown in Schedule E. If issued for more than par, the premium is shown in Schedule E as paid-in surplus.

The balance sheet of a corporation may show capital stock offset by subscriptions. In the computation of invested capital, the amount of capital stock representing subscriptions must be disregarded. A mere subscription to stock does not add to the invested capital of a corporation. Only the amount actually paid on subscriptions can be included in invested capital. If the subscription is charged to a personal account having a credit balance, that part of the subscription which offsets the credit balance is admissible as invested capital.⁷

In order to induce the public to purchase an issue of preferred stock, it may be necessary to issue a bonus of common stock. In such a case, the bonus stock is disregarded in computing invested capital. Only the net proceeds of the issue of preferred stock constitute invested capital. A different situation arises, however, when stock is issued as a bonus with a sale of bonds. This is usually done in order that the bonds may sell at par or at a desired price. The amount to be included in invested capital in such a case is the difference between the actual selling price of the bonds with the stock bonus and the price at which the bonds could have been sold without the stock bonus. The excess, if any, of the par value of

the bonds over the price at which they could have been sold without the bonus stock, is deemed discount and must be written off over the life of the bonds.⁸

When stock is issued for property, the determination of invested capital becomes more difficult. The excess profits tax law first divides property into two classes—tangible and intangible. There is a further distinction made with respect to a certain kind of tangible property called "inadmissible assets."

Under the law, tangible property includes some assets which are ordinarily regarded by the layman as intangible assets. Stocks, bonds, bills and accounts receivable, notes and other evidences of indebtedness, and leaseholds are considered under the law as tangible property.⁹

Where stock is issued for tangible property, the amount to be included as invested capital is the actual cash value of the property at the date of payment, not to exceed, however, the par value of the stock issued therefor. In special cases, the excess of the actual cash value over the par value of the stock issued for the property, may be included in invested capital.¹⁰

Enforcible notes or other evidences of indebtedness of a subscriber received upon a subscription to stock may be included in invested capital to the same extent as other tangible assets, only under the following conditions: "(a) if such notes or evidences of indebtedness could under the laws of the jurisdiction in which the corporation was organized legally be received in payment for stock, and (b) if they were actually received by the corporation as absolute, and not as conditional, payment in whole or in part of the stock

⁶ Article 542, Regulations 45.

⁷ Bulletin 1-20-664.

⁸ Article 832, Regulations 45.

⁹ Article 47, Regulations 41.

¹⁰ Section 326 (a-2), Law.

subscription."¹¹ Actual value of the note would ordinarily be the discount value at the date of exchange for stock.

The Stock Corporation Law of New York contains the following provision regarding the issue of stock for notes: "... nor shall any such corporation or officer discount any note or other evidence of debt or receive the same in payment of any instalment or any part thereof due or to become due on any stock in such corporation." Thus, notes received for stock in New York State cannot be recognized as invested capital.

The Solicitor has ruled that where stock is issued for notes which are to be paid only from the dividends on such stock, the notes cannot be included as invested capital.¹² The basis for the ruling in this case was that the payment of the notes was conditioned on the receipt of dividends by the stockholders; that the notes were not the equivalent of cash, could not be easily discounted, and consequently added no value to the capital of the company.

Inadmissible assets are "stocks, bonds and other obligations (other than obligations of the United States), the dividends or interest from which are not included in computing net income."¹³ Examples are municipal and state bonds and stock of corporations, subject to tax. Liberty bonds are not inadmissible assets. These assets are treated like other tangible assets received for stock, except that a deduction must be made from the net invested capital of "a percentage thereof equal to the percentage which the amount of inadmissible assets is of the amount of admissible and inadmissible assets held during the taxable year."¹⁴ This percentage is ascertained by dividing the average inadmis-

sibles held during the year by the average total assets, valued in accordance with the statute.¹⁵

The law allows the taxpayer in certain cases to prove that the actual cash value of tangible assets was in excess of the par value of the stock issued therefor at the date of payment and to include the excess in invested capital as paid-in surplus. Proof of excess value must be as of the date of payment of the property into the corporation, and may be based on appraisal, assessed value, market price, or any substantial proof. This provision of the law is intended to apply primarily to cases in which "there has been no substantial change of beneficial interest in the property paid in to the corporation."¹⁶ No allowance is intended for assets acquired at a bargain price.¹⁷

Intangible property includes patents, copyrights, secret processes and formulae, good-will, trade-marks, trade-brands, franchises, and other like property. Subscription lists, mailing lists, and most contracts are intangible property. Intangible property paid in for stock may be included in invested capital at the lowest of the following values:

1. Actual cash value, when paid in.
2. Par value of stock issued therefor.
3. If paid in prior to March 3, 1917, 25% of the par value of the total stock outstanding on that date; if paid in subsequent to that date, 25% of the par value of the total stock outstanding at the beginning of the taxable year.
4. The total amount of intangible assets acquired before and after March 3, 1917, may not exceed in the aggregate 25% of the par value of the total stock outstanding at the beginning of the taxable year.

Thus, even though the intangibles are actually worth the par value of the

¹¹ Article S33, Regulations 45.

¹² Bulletin 22-20-980.

¹³ Article S34, Regulations 45.

¹⁴ Section 326 (c).

¹⁵ Article S52, Regulations 45.

¹⁶ Article S36, Regulations 45.

¹⁷ See Cumulative Bulletin, 1910, pages 280, 286, 287, and 288; Bulletin 21-20-965; 28-20-1064; 40-20-1227.

stock issued therefor, they can only be included in invested capital up to the 25% limitation. The actual cash value of intangibles (usually goodwill) may ordinarily be determined by capitalizing, at a percentage varying according to the nature of the business, the earnings of the previous owner for the previous five years in excess of a fair return on the net tangible assets.¹⁸ Other means of ascertaining the actual value of intangibles are by the amount of earnings after acquisition, cash offers for the purchase of the business at or about the date of acquisition, and sales of the corporation's stock at or about the date of acquisition.

Under Treasury Decision 2499, it was held that organization expenses—that is, all expenses incident to the incorporation of a company, such as legal fees, state incorporation fees, cost of stock certificates, etc.—“constitute a capital investment, such expenses being offset by the asset value of the corporate franchise, an intangible asset of a somewhat permanent character.” For this reason such expenses are not allowable deductions from income but are admissible assets to be included in invested capital.¹⁹ These expenditures can be treated only as intangible property, as the above quoted Treasury Decision infers. Thus, if stock is issued in payment for legal fees in connection with the incorporation of the company or for promoter's services, the 25% limitation would apply as in the case of other intangible assets.

Similar to these expenditures is commission paid by a corporation on the sale of its stock. In a large corporation an entire issue of stock may be turned over to an underwriting syndicate to be sold. For its services, the syndicate receives a commission usually varying from 2% to 10%. At first the Treasury

Department treated this commission as discount on stock, disallowing it as invested capital. This ruling was later reversed by the Advisory Tax Board, which held that reasonable commissions paid by a corporation for the sale of capital stock need not be deducted in computing invested capital.²⁰ The commission, however, must be ordinarily and necessarily paid and must be reasonable. Such commissions when paid for with stock of the corporation should be treated like other organization expenses and intangible assets.

In issuing stocks and bonds for tangible and intangible property, it is best to specify clearly which kind of property each class of securities is being issued for. Otherwise, and unless the contrary can be satisfactorily shown, the law assumes that the bonds were issued for the tangible property and the stock was issued for the remaining tangible property and for the intangible property.

Stock may also be issued for services. Promoting and underwriting services have already been discussed. Many corporations at certain intervals issue stock in payment for the services of their employees. The Department has held that “shares of stock distributed by a corporation to its employees in payment of services rendered, where the amount is not excessive, may be included in invested capital to the extent of the actual cash value of the services rendered.”²¹

The inclusion in invested capital of tangible and intangible property is affected in many cases by the provision in the law with respect to reorganizations. After the first excess profits tax law was passed on March 3, 1917, several corporations attempted to secure

¹⁸ Cumulative Bulletin, 1919, page 281.

²¹ Cumulative Bulletin, 1919, page 283, Ruling 13-19-431.

¹⁹ Bulletin 10-20-777.

²⁰ Article 818, Regulations 45.

as invested capital the appreciation of their tangible and intangible assets by reorganizing and issuing stock of a par value equal to the actual value of the assets at that time. The law prevents this, however, by providing that "where a business is reorganized, consolidated or transferred, or property is transferred, after March 3, 1917, and an interest of 50 per cent or greater in such business or property remains in any of the previous owners, then for the purpose of determining invested capital each asset so transferred is valued (a) as if still in the possession of the previous owner, if a corporation, or, if not a corporation, (b) at its cost to such previous owner, with proper adjustments for losses and improvements."²² The provision with respect to a change of ownership of property has been overlooked or ignored by corporations time and again.²³ A recent case comes to mind of an individual who purchased a lease for approximately \$5,000 and turned it over to a corporation of which he was practically the owner for \$100,000 par value of stock. He was surprised when he found that the Department would not permit more than \$5,000 as invested capital.

The original issue of stock for tangible and intangible property is further affected under the law by a return of the issued stock to the corporation through purchase or donation. If the stock has been purchased by the corporation prior to the taxable year, the cost of the stock must be deducted from invested capital, if such stock is included in the stock outstanding. If the stock is purchased during the taxable year, it is deemed to have been purchased out of current profits as far as possible. That part of the cost of the stock which has not been paid out

of current profits must be deducted from invested capital as of the date of purchase.²⁴

Stock returned to the corporation as a gift by the stockholders creates a different situation. Article 861 of Regulations 45 provides: "Where stock which has originally been issued or exchanged by the corporation for property (tangible or intangible) is returned to the corporation as a gift or for a consideration substantially less than its par value, the stock so returned shall not be treated as a part of the stock issued or exchanged for such property."

Under this ruling, assuming that a corporation originally issues stock for cash and later part of this stock is donated back to the corporation, no adjustment of invested capital is necessary because the stock was not originally issued for property. However, if the stock returned was originally issued for tangible or intangible property, a deduction must be made, in the space provided in Schedule E of the return, from the total capital stock issued. This deduction reduces the total par value of the stock originally issued for the property. If the actual cash value of the tangible property is lower than this reduced par value of the stock originally issued therefor, a further deduction is made of the difference. In other words, if the actual cash value of the tangible property is lower than the par value of the stock issued therefor after deducting treasury stock, invested capital is not affected by treasury stock. The same is true of intangible property, except that, instead of actual cash value, the 25% limitation may apply. To illustrate, take the following hypothetical case:

The A Corporation issued in 1916 stock of the par value of \$100,000 to B and C. B paid \$25,000 in cash

²² Article 941, Regulations 45.

²³ See Bulletin 42-20-1252.

²⁴ Article 862, Regulations 45.

and tangible property actually worth \$20,000, for \$50,000 of stock. C paid in intangible property actually worth \$40,000, for \$50,000 of stock. In 1919 B donated to the corporation \$5,000, and C \$10,000, of the stock originally issued to them for property. The computation of invested capital, without considering any but the above facts, would be as follows:

Capital stock outstanding (per books).....	\$100,000.00
Deduction for treasury stock.....	15,000.00
	<hr/>
	\$85,000.00
Deduct—Difference between the actual value of tangible property (\$20,000) and par value of stock originally issued therefor, after deducting returned stock, "which shall not be treated as part of the stock issued for such property" (\$25,000 - \$5,000 = \$20,000) ....	.....
Deduct—Difference between 25% of \$100,000 (limitation on intangible property) and par value of stock issued therefor, after deduction of treasury stock (\$50,000 - \$10,000 = \$40,000).....	15,000.00
	<hr/>
Net Invested Capital.....	\$70,000.00

If treasury stock is sold, the net proceeds, as in the sale of the original issue, may be included in invested capital.

The total capital stock outstanding may consist of capital stock paid in and capital stock distributed as a dividend. The latter, known as a stock dividend,

has caused much discussion because the law treated it as taxable income in the hands of the recipient. The Supreme Court of the United States recently decided, however, that a stock dividend does not represent income and cannot be taxed under the income tax law. So far as invested capital is concerned, a stock dividend has no effect, because surplus is reduced and capital stock increased by the same amount. There is a distinction made, however, between capital stock paid in and the capital stock representing a stock dividend. This distinction lies in the treatment of an operating deficit.

Deficits arising as a result of the payment of dividends out of capital, the writing off of stock discounts or intangibles, must be deducted from the capital stock outstanding in computing invested capital. On the other hand, the regulations provide that "capital or surplus actually paid in is not required to be reduced because of an impairment of capital in the nature of an operating deficit."²⁵ Stock issued as a dividend cannot be considered "capital or surplus actually paid in." Therefore, if a stock dividend has been paid and subsequently an operating deficit arises, for the purpose of computing invested capital, the capital stock outstanding must be reduced by the deficit up to the amount of the stock dividend.

²⁵ Article 860, Regulations 45.

RELATION OF COST DEPARTMENT TO OTHER DEPARTMENTS

BY J. LEE NICHOLSON*

THE departmental divisions of a business concretely represent the principle that concentration of effort and responsibility promotes efficiency. The department executive is required to concentrate his efforts upon the affairs of the department under his control, and his responsibility is limited to that particular department.

The advantage which accrues from departmental divisions will undoubtedly be increased if a thorough spirit of co-operation is practiced by the several departmental executives. Whilst the object to be gained by the concentration of effort and responsibility within the limitations of each department is that department's growth and success, nevertheless there will always exist interdepartment points of contact by means of which the executives are able to advance the interests of other departments and thus benefit the business as a whole. To do this, however, antagonisms must not exist; there must be a harmonious and co-operative spirit.

Harmony and co-operation in all of the relations between a cost department and other departments are absolutely indispensable to the utility of a cost department, if the dominant object—a greater degree of efficiency—sought by departmentalizing a business is to be fully accomplished.

The specific functions of the cost department may be shown by the following outline:

1. To compile costs.

2. To present compiled costs in such a manner as to analyze the costs of each definite stage in the course of manufacture, either (a) for the purpose of making comparisons of current costs with similar costs for past periods, or with standard costs, or (b) for the purpose of providing a reliable basis upon which to formulate estimates.

The duties of the head of the cost department may be briefly summarized as follows:

He must at all times maintain a high standard of efficiency in the department. This can be accomplished only by keeping in close contact with the personnel of the department, for the purpose of gauging their respective abilities.

He must be ever watchful for changing conditions which affect costs. His cost system should indicate such changes as they occur, and he should promptly exhibit them for the information of executives and managers. Inasmuch as changes in manufacturing conditions will usually involve changes in business policy, or in manufacturing detail, no argument is necessary as to why the cost accountant must promptly recognize and report them.

He must by contact with the executives of other departments possess a precise knowledge of their individual requirements with respect to periodical reports. This applies not only to the nature of the information required, but also to the form in which it will be the most effective. One executive may be accustomed to reason by the use of percentages, another by tabulations,

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another by graphic exhibits, etc. Each varying requirement must be provided for.

The duties of the head of the cost department as indicated above, impose the requirement of marked executive ability. He must possess a knowledge of cost accounting principles and a practical knowledge of manufacturing details; that is, he should have a general knowledge of the conditions prevailing in a manufacturing plant.

He must be diplomatic and tactful in his dealings with executives, managers, foremen, and workmen, accepting and giving due credit for any suggestions which they may advance for improving the system. On the other hand, he must be sufficiently forceful to uphold any necessary discipline.

The relation of the cost department to the other departments is thus clearly indicated. The question now to be considered is as to how the function should be performed. In providing a course of procedure, regard must be had to the fact that the requirements of the various departments differ considerably, even when the business is conducted under stable conditions. In the majority of instances, business conditions are not stable but are subject to frequent changes, and this results in a greatly enhanced importance of the cost department in its relations with other departments.

What these relations should be in order to secure best results will now be considered individually under the following heads:

Relation of the cost department to:

1. Foreman
2. Superintendent
3. Sales department
4. Chief executive

Relation of Cost Department to Foreman

By reason of constant contact with actual working conditions a capable

foreman should be able to render valuable service to the cost department.

Association with the workmen enables him to gauge their individual capacities and assign their duties accordingly, thereby insuring the best possible results from the individual workman.

He becomes familiar with the uses and capabilities of each unit of the mechanical equipment in his department, and he is therefore able to employ each unit to the best possible advantage.

He must know intimately the operations conducted in his department and the class and grade of materials used.

His experience will often enable him to prevent waste and make the most of scrap materials.

Even though his knowledge of the operations conducted in other departments of the factory is less intimate, he should be able to co-ordinate the work of his department with the requirements of other departments, thus insuring harmonious interdepartmental relations.

Whilst a foreman is not always classed as the head of a department, he is, nevertheless, an important executive in any manufacturing business. He usually possesses a clear comprehension of material and labor costs, but he is generally unfamiliar with overhead costs. His lack of knowledge in this respect is due to the fact that little or no effort is made to amplify the little knowledge he may gain by experience. Since, as a rule, foremen are ambitious to expand their utility beyond the mere service of overseeing workmen, it therefore devolves upon a cost department to educate them in the matter of costs, particularly with respect to overhead costs.

The items of overhead should be explained to the foreman and he should be shown how the overhead unit cost of production is affected by variations

in the volume of production. For this purpose the cost department should furnish periodical comparative statements of overhead charges to him, showing the overhead unit cost of production in that part of the work over which he exercises supervision. Excessive waste or insufficiency of production should also be brought to his attention, because he is in a position to correct both by giving particular attention to workmen who may be at fault, or to the inadequacy of tools and machinery, or to their improper use.

The following form shows the class of information which would be of great assistance in guiding a foreman in the management of his department:

A very close alliance should exist between the cost department and the factory foreman in order that the duties of both may be developed to the utmost efficiency. The head of a cost department should understand that the foreman is one of the most efficient aids in reducing the cost of production, and the foreman should understand that he is dependent upon the cost department for information which he must have in order to accomplish the most satisfactory results.

Relation of the Cost Department to the Superintendent or General Manager

The superintendent, or general manager, is the supervising head of a factory and upon him rests the re-

**COMPARATIVE MONTHLY STATEMENT OF OVERHEAD CHARGES
AND COMPARATIVE PERCENTAGES**

For.....Department

OVERHEAD	JAN.	FEB.	MAR.	APR.	MAY	JUNE	ETC.
Rent							
Insurance							
Taxes							
Light, Heat, Power							
Depreciation							
Repairs							
Indirect Material							
Supplies							
Supervision							
Non-Productive Labor							
Sundries							
TOTAL OVERHEAD							
PRODUCTION (preferably in units)*							
PRODUCTIVE LABOR HOURS ..							
PERCENTAGE OF OVERHEAD TO PRODUCTION or to Pro- ductive Labor Hours (as the case may be)							

*If production is not a comparable basis, by reason of work being in process, then use "Productive Labor Hours."

sponsibility for properly conducting all factory detail, including the product of the factory.' Bearing in mind what has previously been stated respecting the absolute necessity for harmony and co-operation, and assuming these conditions to exist, one may set forth in outline the following principal lines of information required of the cost department by a superintendent or general manager:

1. Prompt information showing current and comparative costs of materials, labor, and overhead in connection with individual work, operations, or processes, or by departments—productive and non-productive.

2. Current and comparative information respecting the volume of production accomplished in each productive division of the factory, and for the factory as a whole.

3. Current and comparative information respecting losses by defective work and lost time.

4. Information showing the various classes and quantities of product manufactured, on hand, ordered, and sold, and the relation of unfilled orders to the period required for their production.

5. Information showing the quantities of raw materials on hand for current production.

By virtue of his office, the superintendent or manager is charged with many responsibilities throughout the entire factory process, ranging from the acquisition of the raw materials to the turning out of the finished product, and he is dependent upon the cost department for guidance in each part of the processes.

The two officials are actuated by entirely different motives. The superintendent or manager seeks to conduct the factory to the best possible commercial advantage, whereas the head of the cost department seeks to exhibit in the language of costs the results of

operation; these results to constitute not only a postmortem of operations, but also to provide a fact-basis for future policy formulation.

Relation of Cost Department to Sales Department

An effective sales department should report the volume of sales in accordance with which the production of the factory will be regulated. Volume of production must, however, be considered in connection with the margin of profit which is to be derived from it.

Volume of production will, under any and all circumstances, affect the cost of production. It is immaterial whether the volume is represented by product manufactured for stock and awaiting sales orders or whether it is product directly manufactured for sales orders.

This fact should always be carefully considered in forming estimates of cost based upon volume. If, for instance, the sales department is negotiating a prospective sale of 50,000 units, it would be unsafe to give an estimated cost, or the actual cost, as applying to any volume other than 50,000 units.

If only 40,000 units were sold, on the basis of cost for 50,000 units, the expected profit might be very materially reduced or even disappear.

On the other hand, if the sales department used the 50,000 unit cost as a basis for a prospective sale of 60,000 units, failure to recognize the decrease in cost of production for the larger volume might imperil the order. The cost department should be in a position effectually to guide the sales department in the matter of costs as affected by volume of production.

Obviously the margin of profit is the difference between the cost and selling prices. Selling prices, however, are usually determined by competitive conditions, a fact which imposes the

greatest possible degree of care in ascertaining costs, and also involves questions of policy. Sales cannot be made at a reasonable profit without accurate knowledge of the costs. Taking account, therefore, of these and other similar items of information necessary for proper guidance, the cost department should furnish the sales department with the following data:

1. Factory costs—sectionally, and as a whole—of each line of product handled.

2. Total cost, including selling and administrative costs, of each line of product handled.

3. Effect upon the costs caused by varying volumes of production.

4. Information relating to unfilled orders.

5. Selling costs, and the sales made by each member of the selling force, the object being to exhibit the profitable or unprofitable results in each case.

6. Analysis of the sales territorially. The three forms which follow indicate some of the types of information just referred to.

Relation of Cost Department to Chief Executive

Responsibility for directing the activities of a business devolves upon the chief executive. In his executive capacity he performs functions comparable with those performed by an axle

STATEMENT OF SALESMEN'S SALES, MANUFACTURING COSTS, AND PERSONAL EXPENSES

FOR FEBRUARY, 1920

Salesman, J. D. JONES

	SALES AND MFG. COSTS		GROSS PROFIT		PERSONAL EXPENSES PRORATED	NET PROFIT		PERSONAL EXPENSE DETAILS	
	Sales	Mfg. Costs	Amount	%		Amount	%	Particulars	Amount
A.....	\$1,500.00	\$1,050.00	\$450.00	30.00	\$107.00	\$343.00	22.87	Salary	\$150.00
B.....	750.00	562.50	187.50	25.00	53.50	134.00	17.86	Commission	200.00
C.....	1,700.00	1,190.00	510.00	30.00	121.27	388.73	22.87	Traveling	98.50
D.....	2,500.00	2,000.00	500.00	20.00	178.33	321.67	12.87	Hotel and Maintenance	125.00
E.....	1,800.00	1,260.00	540.00	30.00	128.40	411.60	22.87	Entertaining	15.00
Totals.....	\$8,250.00	\$6,062.50	\$2,187.50	26.51	\$588.50	\$1,599.00	19.38		\$588.50
Previous month ..	\$10,500.00	\$7,716.45	\$2,783.55	26.51	\$650.00	\$2,133.55	20.32		
This year to date	18,750.00	13,778.95	4,971.05	26.51	1,238.50	3,732.55	19.91		
Similar period last year.....	25,500.00	18,360.00	7,140.00	28.00	1,500.00	5,640.00	22.12		

NOTE: Unfilled orders received during the month should be considered in connection with the salesman's expenses

FORM 2

The form shows that products A C E are the most profitable part of the sales made by J. D. Jones, and that product D is the least profitable. It also shows that his sales have steadily declined during the current year, as compared with the previous similar period. Similar statements would be required for each salesman, and for the office, which would be regarded as a salesman. The statements would enable the head of the sales department to criticize and strengthen any of the weak points which are shown to exist.

around which a wheel revolves. Business details similarly revolve around him, the details being reported to him by the various department managers in their capacities as spokes of the wheel. He must see that all details are working smoothly and promptly correct any causes of friction.

The class of periodical information that he requires from a cost department must directly represent each important manufacturing operation through which the costs for materials, labor, and overhead have passed. If the costs of a product which has undergone several operations are reported by the cost department in total only, and the total cost compares favorably with

previous total costs, the material inference would be that the manufacturing conditions were continuing satisfactorily; whereas, if the report dealt with the costs of each operation, it might have been shown that a substantial gain in efficiency by one of the operating departments was counterbalanced by a substantial loss of efficiency in another operating department. The report, therefore, while truly representing the total cost, would nevertheless be misleading as a report of manufacturing conditions.

The principal purposes for which cost information is required by a chief executive are the determination of the following points:

SUMMARY OF SALES, MANUFACTURING COSTS, AND SELLING COSTS FOR FEBRUARY, 1920

SALESMAN AND OFFICE	SALES AND MFG. COSTS		GROSS PROFIT		SELLING COSTS			NET PROFIT	
	Sales	Mfg. Costs	Amount	%	Pro Rata Gen. Costs	Personal Costs	Total	Amount	%
Jones, J. D.	\$8,250.00	\$6,062.50	\$2,187.50	26.51	\$330.00	\$588.50	\$918.50	\$1,269.00	15.38
Harrison, J. M. . .	6,500.00	4,745.00	1,755.00	27.00	260.00	500.00	760.00	995.00	15.31
Golding, B.	9,500.00	6,840.00	2,660.00	28.00	375.00	650.00	1,025.00	1,635.00	17.21
Smith, H. W.	5,500.00	4,697.50	1,402.50	25.50	226.00	550.00	770.00	638.50	11.50
Office.	7,250.00	5,256.25	1,993.75	27.50	290.00	.....	290.00	1,703.75	23.50
Totals.	\$37,000.00	\$27,001.25	\$9,998.75	23.75	\$1,475.00	\$2,288.50	\$3,763.50	\$6,235.25	16.85
Previous month. .	\$45,000.00	\$34,200.00	\$10,500.00	24.00	\$1,520.00	\$2,400.00	\$3,920.00	\$6,880.00	15.30
Up to date this year.	82,000.00	61,201.25	20,798.75	25.36	2,995.00	4,688.50	7,683.50	13,115.25	15.99
Similar period last year.	98,000.00	72,520.00	25,480.00	26.00	3,200.00	4,800.00	8,000.00	17,480.00	17.84

NOTE: Unfilled orders received during the month should be considered in connection with salesman's expenses, together with any exceptional expenses, of a deferred character, of the general costs.

FORM 3

This form shows a summary of the sales of each salesman, irrespective of class of product, which is shown in Form 2. A pro rata of the general sellings costs is added, which will account for the difference between the net profit shown by the statement and by Form 2.

The statement shows a steady decline in volume of sales, and net profit, which would be traceable to the salesmen individually by scrutinizing their work as shown by Form 2.

1. What changes are required in the cost system for the securing of more essential detail.

2. Where executive action is necessary for the correction of inefficiencies resulting from unbalanced operating departments, excessive overhead expenses, and losses through defective work.

3. Executive action in connection with the sales department.

4. Questions of policy respecting the business.

The head of a cost department must be supreme in all matters relating to the organization and personnel of the department, for which he should assume full responsibility. Cost department reports must be promptly and regularly rendered.

He should always remember that

reports which he may clearly understand by reason of his familiarity with the subject may not be as clear to others who are not skilled in interpreting statistical statements. The reports should be fully explained and attention directed to any points of particular interest. For this purpose, the head of the cost department should confer with those to whom the reports are submitted. If this practice is not followed, much information of vital importance may be overlooked.

He should also appreciate that a chief executive is particularly interested in matters which affect all of the departments. All cost department reports should be rendered through the chief executive, the head of the cost department personally attending for the purpose of explaining them.

ANALYSIS OF SALES AND DETAILS OF GROSS PROFIT

FOR FEBRUARY, 1920

PRODUCT	DETAILS OF SALES			GROSS PROFIT		SELLING COSTS		NET PROFIT	
	Salesman	Office	Total	Amount	%	Amount	%	Amount	%
A	\$1,500.00	\$1,500.00	\$6,000.00	\$1,800.00	30.00	\$600.00	10.00	\$1,200.00	20.00
B	6,500.00	2,500.00	9,000.00	2,250.00	25.00	1,080.00	12.00	1,170.00	13.00
C	3,500.00	2,000.00	5,500.00	1,650.00	30.00	500.00	9.09	1,150.00	20.91
D	5,000.00	1,000.00	6,000.00	1,200.00	20.00	700.00	11.66	500.00	8.33
E	4,000.00	6,500.00	10,500.00	3,098.75	29.51	833.50	8.41	2,215.25	21.10
Total	\$23,500.00	\$13,500.00	\$37,000.00	\$9,998.75	23.78	\$3,763.50	10.17	\$6,235.25	16.85
Previous month	\$28,000.00	\$17,000.00	\$45,000.00	\$10,800.00	24.00	\$3,920.00	8.71	\$6,880.00	15.30
This year, up to date	54,000.00	28,000.00	82,000.00	20,798.75	25.36	7,683.50	9.37	13,115.25	15.99
Similar period last year	63,000.00	35,000.00	98,000.00	25,480.00	26.00	8,000.00	8.16	17,480.00	17.84

NOTE: The effect of deferred charges—part of the selling costs—should be considered in connection with the statement.

FORM 4

This form shows an analysis of the sales with respect to class of product, proportion sold by salesmen and by the office, together with the gross and net profit from each class of product. The decline in volume of sales, and in the gross and net profit as compared with previous periods, would be instantly traceable by comparison with the similar statements for those periods.

FACTORY CONTROL THROUGH ACCOUNTS AND STATISTICS

BY J. P. JORDAN*

IN the consideration of factory control it might be well first to come to some understanding as to what is meant by factory control.

In the cradle days of industrial life the control of manufacturing institutions was much along the lines of fatherly interest on the part of the employer and a real feeling of almost love and reverence on the part of the employee. Many beautiful stories have been written in connection with the relations of the employees to their employers, where the spirit of loyalty was deeply rooted and where the employer was looked on as the father confessor to everyone in the plant—and rightfully so.

But as time went on and plants grew beyond the fondest expectations of their founders, there came into existence a form of factory control which was very foreign indeed to the almost family interest which pervaded the plants under the earlier regime. This was a natural result, and a study into the psychology of these relations would seem to indicate that there was no other natural course to pursue.

Picture for a moment a plant exceeding the size where personal contact was a possibility—a condition reached before the necessity for co-ordinating records was recognized—and it may readily be understood that the management was soon driven into a position of control which became, to a greater or less extent, dictatorial.

Picture the managing head of a large

* Vice-President and director of Operation of C. E. Knoeppel & Co., Inc., and Lecturer on Factory Organization in New York University School of Commerce, New York City.

institution so loaded down with the many duties of the business that he had no opportunity whatever to circulate among the various operating departments, and consequently was entirely without personal knowledge of the various operations in his plant, and it does not take a graphic chart to indicate that the management, in a position of this sort, would have become most dictatorial and eventually unreasonable.

To preserve the dignity of his office the manager was forced to use the weapons of assumption and bluff, for neither the advantage of personal knowledge nor yet of records was available to give him a true picture of the workings of the various departments of his plant.

Developing this kind of a disposition, the manager naturally imparted to his subordinates a similar disposition, and they in turn dealt in like manner with the employees all the way down the line. This resulted in developing a line of industrial Czars, as against the preceding line of industrial leaders and confidential advisers to all their employees.

Slowly but surely the dictatorial and overbearing method of management gave place in the last twenty years to a desire on the part of the more thoughtful leaders to know more in respect to the performances of their various subordinates, and as a result, to measure more judiciously and carefully the performances of the men held responsible for the various operations in the plant. This produced a steady stimulation of the development

of costs, which in turn was followed by an awakening as to the necessity of accurate records in all phases of control and particularly in respect to the control of production in its various stages from the original planning to the final completion of the product.

The World War brought about conditions which have given a wonderful impetus to the consideration of far different methods of factory control, not alone on account of the new and stronger position which labor has taken, but on account of the many examples given of what real and actual planning could accomplish within the industries themselves as well as in industries by groups.

As a result of all these upheavals, the industrial manager has finally awakened to the fact that adequate control in great detail has become the paramount consideration at the present day. This consideration is in reality a partial return to the earlier methods of industrial management, but necessarily under a *different plan* on account of the size of the majority of plants today as against what they were in the days when management managed by personal contact.

The nearest one can reach this personal contact today is through the medium of records of performance, whereby the various subordinate responsible heads of departments are represented by records so designed that a true report of the accomplishment of each is available for immediate and intelligent use.

The principal elements of an industrial institution which require control may be regarded as follows:

1. *The Finances.* The providing and maintaining of sufficient working capital properly to operate the plant.

2. *The Product.* The selection of products to be manufactured.

3. *The Plant.* The provision of a

suitable site, and buildings in which to operate.

4. *The Equipment.* The filling of the plant with the necessary tools and equipment for manufacturing the goods desired.

5. *The Materials.* The purchasing and supplying of the raw materials necessary to go into the product and to maintain the plant and equipment.

6. *The Labor.* The employment of and proper maintenance of the labor necessary to make the product and maintain the plant.

7. *The Selling.* The provision of adequate selling facilities to market the completed product.

These seven elements require control, not nearly so much on account of the necessity of controlling each one individually but on account of co-ordinating the action of each with the other, exactly as each intricate part of a machine must co-ordinate its action with all the other parts. In fact, neglect to properly co-ordinate these seven elements can result in nothing but failure, much more so in the present than in the past.

In the day of personal contact it was comparatively easy to insure co-ordination, not entirely on account of the fact that the manager could be more closely in touch with the details, but more on account of the fact that this personal contact insured a far deeper interest on the part of those who were responsible for each division of the business.

Today, however, industrial plants have grown to such magnitude that the details involved are far beyond the capacity of any individual or any group of men to operate from the standpoint of pure memory. It has therefore become necessary to devise methods of control which reduce the various detail operations to a positive routine and thereby permit a co-ordination

which otherwise would be absolutely impossible.

II

Let us hastily consider a few of the points in respect to the seven elements which are necessary to be controlled through detailed records.

1. *The Finances.* The need for financial records requires no special comment on account of the fact that as money is money there has hardly been the necessity of arguing for records. If only the same reasoning had been applied to other details of the business many years ago, we would be much further along in factory control than we are today.

The factors entering into the other six elements have a large bearing on the finances, however, as the results, reflected in increase or decrease of inventories, have a large bearing on the financial needs of the business.

2. *The Product.* This feature at the start is subject to no particular control. It is only a matter of selecting the product desired for manufacture.

As time goes on, however, the matter of product should be kept under very decided control, not record control so much as managerial control, in that so many plants have multiplied their products to a degree which has badly handicapped efficient manufacture on account of too large a line and too small a manufacturing unit.

3. *The Plant.* The element designated as plant needs only passing mention, excepting that on account of the many changes made in buildings a detailed record of the various branches of the plant should be on file in order to insure proper accounting for changes, fires, and all other events which may happen in connection with a building.

It should be brought out, however,

that proper control of depreciation cannot be exercised unless there are proper control records of the various individual elements entering into the plant construction.

4. *The Equipment.* It is now quite generally recognized that there are many records in connection with the control of equipment which should be maintained. The first record is, of course, that of the purchase of each piece of equipment, with its installation cost, and the proper carding of the same on a form, with provision for entries of depreciation and of the repairs and maintenance involved in the upkeep of the equipment.

In addition to the record of the physical property itself, there should be a most careful record of the use and capacity of each piece of equipment, which becomes the basis of the records for the control of production.

5. *The Materials.* All transactions in connection with materials should be with due consideration to the fact that the purchase of materials is nothing more or less than transforming money into a different form, which form must always be remembered to be worth just as much as the money which was originally expended.

This means that proper control of all purchases should be established, such control extending back to the source of requirement for the material, providing at this point a statement of the necessity for the material, with approvals of those in authority to permit the purchase.

Proper control should be established in connection with the getting of prices, of actually purchasing, and of routing and receiving the material. The points just mentioned have been for some time fairly well taken care of, but the point which follows has probably been neglected by many firms to a most shameful degree.

After the material has reached the plant it should enter under a most rigid control, both physical and by record. This means that adequate stock-rooms should be provided where no material can be obtained excepting on written order. In fact, no stock records can be maintained unless such physical control is established.

Stock records should be provided for all material in storage, such records giving knowledge at all times of exactly what material is on hand and its value. These records not only safeguard the money which is tied up in the material, but they give what is an even more important result, namely, that of permitting adequate control of production through positive knowledge of the materials on hand which enter into the product.

The record control does not end at the stock records, but each storage unit should have a controlling account in the general factory ledger. This account is debited with all purchases and credited with all withdrawals, the balance at all times giving the controlling figure as to the value of the inventory on hand thereby enabling the computing of the profit and loss at any time.¹

6. *The Labor.* The control of labor is a subject which has many angles and consists not only of control as regards labor costs, but in addition to this, of various records in connection with the efficiency of labor and its general welfare.

A control of the conditions surrounding labor is squarely up to the management in the provision of a proper plant in which to work and of proper equipment with which to work. All other matters, such as club and rest rooms, etc., are of minor importance compared with the conditions prevailing

at the actual working place, which is after all the main point at issue.

After the provision of proper working conditions the next main element in control of labor is that of a properly outlined and operating employment department, and the following up of the employees' conditions and success after being employed. This latter point is of the utmost importance, as every effort should be made to locate each new employee in work which can be efficiently performed and in the performing of which the employee is happy and contented.

There should be provided a system of control which will permit discontented employees to appeal for assistance. In connection with this there should in turn be provided a means of investigating all such complaints and of bringing to the attention of the management those points which need attention for the betterment of the personnel.

From the financial side there should be provided means of reporting the work done by all employees in a manner to conform to the analytical records used for the accounting for all such labor. These orders are presumed to be so arranged as to furnish regular reports in connection with labor costs and in connection with the work turned out by each employee, as compared to a reasonable standard set, which standard should be attained.

A controlling record should be established for each employee giving a fair and true picture of his efficiency as compared to the standards under which he is working. This record should also include such items of importance as sickness, accidents, suggestions, and all other matters which should be shown to the advantage or disadvantage of each employee. These records will then become the basis of consideration for advancement, and will fur-

¹ See article on "Basic Principles of Stores Organization" in this issue.

nish a real managerial basis on which to choose those best fitted for higher positions which become vacant from time to time.

7. *The Selling.* The selling of the product is of the most vital importance, and while perhaps not more important than the manufacturing, it is at this point that the responsibility of disposing of the product at a profit is centered.

The controls necessary in connection with the selling are many, especially when taking into consideration the managerial control necessary in connection with each minute branch of the selling department.

First of all, there must be controls of the main products as sold in comparison with the products as produced by the plant. These should be further analyzed into selling by districts or branches and finally by individuals.

The controlling records of unit sales are not sufficient, however, to reflect the real efficiency of the selling department, as it is also necessary to institute control records of the price obtained by each selling unit as compared to the manufacturing cost shown by the cost records.

In connection with the selling records there should also be taken into consideration the proper control of the money expended for each selling unit as compared to the product sold.

III

Aside from the physical features involved in properly caring for materials, equipment, etc., the methods of control may be in the main described as passing through the following channels:

1. *Analytical Orders.* All work performed, all material used, and all shipments made should be under the control of either a production order, a standing expense order, or a shipping order.

2. *Plant Record Data.* All material should be accounted for on requisitions and all labor on time cards. Direct charges for expense to various expense accounts direct from purchases should be accounted for under the orders receiving the benefit of such expense.

3. *Ledger Accounts.* Controlling accounts should be established in the ledger for all financial, plant, and material asset accounts, and all liabilities. Controlling accounts should also cover the various expense groups in the plant.

4. *Statements of Financial Results, Costs, and Efficiency.* There should be provided a comprehensive arrangement of statements to exhibit at regular intervals the financial results, the costs of both direct and indirect operations, and of efficiency of individuals, groups, and departments.

5. *Graphics.* Simple but comprehensive graphical exhibits of the main features of operations and results should be prepared so that the management may quickly ascertain the principal factors with which it should deal.

IV

Under methods of control we briefly discussed the main points in connection with emanating records and the statements of the costs and efficiency of the various departments.

It is, of course, true that the emanating records must necessarily pass through certain procedures before shaping themselves into the proper form of statements or any other control records. We will therefore briefly review the uses which should be made of detailed information, and the form which such information should eventually take to become of true managerial assistance.

1. *Control of Production.* The product to be manufactured being known,

there should be a positive analysis of this product starting with the finished output, showing the various major and minor assemblies, with a continuance of the analysis until it reaches the individual parts. These individual parts may be shipped out as such or may enter into an assembly with other parts, or both.

Having a knowledge of the capacity of each machine or working unit, there should then be an analysis of each individual part into the various operations necessary to produce this part. This analysis should show the best machine on which to do the work, the number of pieces per hour which should be produced under each operation, and a record of the raw material required for producing the part.

There should be some method of planning and scheduling the work on the various parts through their various operations in order that a comprehensive schedule may be made out to route the work properly through the shop. The basis of this schedule in time should be the number of hours for each operation, indicated by the total number of pieces produced divided by the number of pieces per hour which, according to the standard analysis, should be produced at each operation.

In order to communicate to the operating departments the results of this planning, there should be a method of dispatching the scheduled work to the various machines and working places, which usually consist of dispatching stations in each operating department.

At this point the dispatching organization will secure the proper data in connection with the number of pieces produced and the actual time involved thereon, thus completing the entries on the time cards which form the basic data for labor control.

A method of recording the progress on each operation on each part should be provided, not only in record form as on a card where the operations will show side by side, but also preferably by some graphic method whereby the management may see at a glance the efficiency of operation of each working unit.

The scheme of production control is backed up by the stock records, which give accurate information as to the condition of the materials necessary for putting into work the various scheduled operations, both on individual parts and on assembled parts.

From the work briefly sketched, it is evident that the management should have a clear and distinct avenue for scheduling work. After such work has passed through the various operating departments, the management should also have the mechanism of a careful and complete study as to the efficiency not alone of the various departments, but of the individual working units within each department.

Statements of individual machine efficiencies are prepared, exhibits of the idle time of each working place are provided, and the efficiency of each individual operator may be compiled as desired.

2. Cost Control. In those plants where production control is operating to its full extent, the cost control is somewhat anticipated by the control furnished on the direct operations of labor and on the direct material. This method is far preferable to waiting for actual cost figures, as the control mentioned under control of production is almost instantaneous, being coincident with the performance of the work.

In other words, if the expenditure of direct time and direct material is controlled at its source, it is quite evident that the cost control of these factors

is reduced to a more or less perfunctory operation.

On the other hand, this by no means indicates that the actual cost sheet showing the direct labor and material cost is not of the utmost value for comparative purposes, as there still remains the element of money value which, of course, must be considered even though production control was successful in regulating the *amount* of labor in *hours* and the materials in *quantity* which were used in the production of the output. This feature of control, however, attaches more to the regulation of selling prices than it does to the control of the actual operations in the plant.

When we enter the field of overhead costs and the various departmental burden accounts, we are entering an entirely different proposition and one which is susceptible to no other kind of control than through the medium of cost statements.

The various independent expense departments, such as of the generation of electric power, compressed air, steam, gas, and other departments of general nature, must be so arranged as to make them as nearly actual producing departments as is possible. This means that they will have their own code of expense orders, and the product turned out should be carefully accounted for in order that a regular monthly statement of cost per kilowatt hour of electricity generated, per horse-power of steam generated, and so on, can be found and compared month by month.

The various general departments of supervisory and clerical nature should be carefully analyzed by the use of monthly standing orders, and so grouped as to show the cost expended for which certain individuals are responsible. An example would be a cost department where the ratio of

such expense should be kept at some normal figure in proportion to the total number of employees in the plant. This same system would apply to the general superintendent's office, pay-roll department, etc.

The indirect expense of each operating department should be collected through the medium of standing orders in such a way as to show clearly the success or non-success of the one who is held responsible for each department. This means that great care should be taken in making up the standing orders to be absolutely certain that the major portion of the cost statement shall consist only of details for which the head of the department is entirely responsible. If this is not done, the divided responsibility for the figures shown will almost entirely prohibit the managerial function of properly measuring the results of each responsibility and of stimulating the personal interest of each responsible head.

For this reason the setting up of the various expense and burden accounts must be done with great care, so as to consider not only the needs from the standpoint of compilation, but even more from the standpoint of measuring the responsibility of those who are held responsible for the indirect expenses. These expenses will, of course, be covered in ratio to the direct efforts of the department. In other words, the indirect cost of each operating department should be reduced to a cost per direct operating hour, either of men or of machine units, or of both.

V

We may now properly consider the control to be exercised by the management, and particularly consider the similarity which may be observed in present-day management as compared with the earlier and highly successful

method where personal contact and personal interest were the predominating factors.

"The survival of the fittest" is an old but very pertinent phrase. There is no reason whatever why it is not possible to conduct a manufacturing institution with this thought uppermost in mind, provided the management is operating under a method of control which gives a clear and distinct record in connection with every employee, whether working at a producing machine unit, or charged with the responsibility of an entire department or a group of departments.

This, therefore, brings up very sharply the question as to the managerial use of the various controls. And it is this particular feature which so often makes or breaks an industrial institution.

A manager who is fundamentally right will neither commend nor condemn without a proper basis to work on. No one thing can contribute more to a loss of confidence in a manager than unfair criticism on the one hand, or unearned commendation on the other hand.

A foreman or a workman brought up on the carpet for a censure will most gracefully take this censure if the facts can be laid before him. It has been proved time and time again that notwithstanding the chaotic conditions which seem to exist in the industrial world today, the human being is after all about the same as he always has been. The only exception to this is that on account of so much bluffing and bulldozing on the part of managers in the second cycle of industrial evolution, the normal human being is demanding fairer treatment; and when pulled on the carpet and blamed for non-results, he feels—and is perfectly justified in so feeling—that he is entitled to know in detail what has gone wrong.

This has been largely the basic reason for the greater publicity of accomplishments and costs to those who are held responsible for the actual operations, a method which to many managers has been a great change from their past practice and a change which came very hard indeed.

Publicity of costs, that is, the furnishing to each responsible head a statement of the cost of the operations for which he is responsible, is nothing but the operation of giving to him the facilities to more intelligently and more fully perform his duties.

Can any manager conceive that he could operate his business without knowing at stated intervals, to a greater or less extent, how his business stands? Can any manager conceive of going more than one year without an inventory and without a complete profit and loss statement together with a statement of assets and liabilities? Can any manager conceive of operating the business without having his bank balances laid on his desk every day, or the total orders received, or total shipments the day before, and so on through the long list of vitally necessary statistics?

Why is it that a manager thinks he has to have these figures? Why cannot he run the business without any of these figures and simply come in in the morning, read the mail, and tell people what to do without any figures such as enumerated above? The mere mention of such a method of management, so far as the manager himself is concerned, will be regarded by anyone connected with the management of an institution as most ridiculous.

A foreman, or anyone of any authority whatever in a plant, likewise comes to his work every day with certain fixed and unchangeable responsibilities. Is he not in fact a manager? Is

not in fact anyone at all who is charged with any responsibility whatever a manager? If so, where can there be any argument that anyone who is charged with responsibility should not be furnished with all possible data in connection with the efficiency and cost of the work he is in charge of, so analyzed that he will not only know what the accomplishments and costs actually are, but will also be stimulated to increase the accomplishments and reduce the costs, thereby making good the responsibility which has been placed upon him.

The old days of dictation and bulldozing from management are past. Industry is too large, and the various industrial plants are too extensive to get away with any more of this kind of management.

What, therefore, is the substitute? The answer to this is that it is not so much a matter of substitution, but a matter of reverting to the old, original, and very successful method of management of years ago, excepting that the element of personal contact must necessarily be superseded by something which amounts to very much the same thing, namely, a contact through the medium of adequate records which form a direct connection between each individual and the management.

Human nature, after all, is just the same. In the older days the owner or manager of a business inspired his subordinates with his own personality, which in itself was a great incentive. Workers produced because they wanted to produce. They produced because they took pride in producing. They

produced because of that innate quality which influenced them to do the best they could for the personal satisfaction of so doing, and on account of their loyalty for the company for which they were working. They produced because they knew that the boss was fully acquainted with everything they did, and as a matter of pride and interest they wanted to make this accomplishment a credit to themselves.

The new method of management brings about almost identically the same result, and the managerial use of the various controls should therefore be with an inspiration on the part of the manager to give credit to all the members of his organization for being at heart part and parcel of the outfit. He should be guided by the thought that if proper facilities are given to everyone, the result from everyone will be most satisfactory. *This must eliminate bluff, bulldozing, and managerial buffoonery*, and substitute therefor a straightforward, honest, sympathetic, but firm administration based on actual records of performance, which records of performance are in the hands of each responsible head, who in the majority of cases will anticipate a manager's questions by an investigation on his own part and a voluntary explanation of where details have gone wrong, with plans for future prevention.

It is, then, a matter of getting back to the older days of personal contact, but through the new avenues of the various controls which are being provided for the accomplishment of this very necessary result.

THE PERPETUAL INVENTORY OF THE PERSONNEL

BY WILLIAM J. WELLS*

SENSIBLE merchants never fail to take stock inventory twice, or oftener, each year. Yet how many of them ever think of taking an inventory of their personnel? Indeed, how many of them even *can* take an inventory of their personnel?

But they are beginning to realize that their employees are more important than their stock for upon the employee depends how the very stock is selected and displayed to the public, how its values are used to make sales, how the service that means growth is rendered, and how the entire store mechanism revolves to show a profit. Yet many a merchant is still lazily content to do without exact data on the condition of his most important asset—this link between him and his public, the men and women who reflect his policies, his taste, his very character and upon whose attitude the success of his enterprise depends.

For several years R. H. Macy & Co., Inc., has inventoried its personnel. The system to be described secures accurate and fresh data on each and every employee from the day he first appears to seek work, month by month and year after year, as he progresses through the organization. This record is constantly accumulating and always convenient and ready to help answer such questions as:

1. What is the weakest link in the organization?

2. Where in the organization is the man or woman to fill a certain vacancy? (All vacancies are filled from within the organization.)

3. How stable, efficient, and well satisfied is the organization?

Such an inventory can be taken—not only that but it can be made perpetual. We have four personnel inventories annually—in fact, we do keep the records of some 5,500 employees so closely up to date, each filed in his own manila folder, that at any moment we can examine his record, find every mistake he has made, learn his physical and mental standing, see what special training he has had, and ascertain the grades made in examinations on various subjects.

We find out how much merchandise we have on hand twice a year. But we should know daily how much brains, energy, honesty, accuracy, and experience we have on hand.

Our system has proved its value because although our business has increased abnormally in the last few years the number of employees has remained nearly unchanged and errors of all kinds have been reduced. Of course, records do not create efficiency unless they are compiled and properly used. The failure of many to gain results is due to the fact that their records are not brought together in a useful form *and then used*.

Too often knowledge of staff consists merely of its total number and total cost, the number by departments, sexes, names, and what purport to be correct addresses—and nothing more. The only other figures that some organizations have that are really definite, and they are definite as fate, are those steadily creeping figures for wage—cost, and the disheartening statistics on labor turnover.

* General Manager, R. H. Macy & Co. Inc., New York City.

APPLICATION
FOR
EMPLOYMENT*R. H. Macy & Co.*D. O. B. _____ %
TEST 1 _____
" 2 _____
3 _____EACH QUESTION MUST BE ANSWERED ACCURATELY AND FULLY
UNTRUTHFUL STATEMENTS WILL CAUSE REJECTION OF YOUR APPLICATION

Date _____

Name in full _____ Date of birth _____

Address _____ How long have you lived at this address _____

City _____ Married, Single }
Widow or Widower }

IF PREVIOUSLY EMPLOYED GIVE NAMES AND ADDRESSES IN CONSECUTIVE ORDER OF ALL FORMER EMPLOYERS

NAME OF LAST EMPLOYER		POSITION YOU HELD	MONTH	YEAR
1 {	STREET _____	IF SELLING, WHAT SOLD _____	FROM _____	
	CITY _____		TO _____	
2 {	STREET _____	IF SELLING, WHAT SOLD _____	FROM _____	
	CITY _____		TO _____	
3 {	STREET _____	IF SELLING, WHAT SOLD _____	FROM _____	
	CITY _____		TO _____	
4 {	STREET _____	IF SELLING, WHAT SOLD _____	FROM _____	
	CITY _____		TO _____	

IN SPACES BELOW GIVE NAMES AND ADDRESSES OF PERSONS (NOT RELATIVES OR FORMER EMPLOYERS) WHO CAN VOUCH FOR YOUR
HONESTY, CHARACTER AND HABITS.

NAME	(ADDRESS CITY AND STREET NUMBER)	WHAT OCCUPATION	KNOWN YOU HOW LONG

IMPORTANT

WHAT SCHOOL DID YOU ATTEND LAST? _____ ADDRESS OF SCHOOL _____

WHAT GRADE OR CLASS WERE YOU IN WHEN YOU LEFT? _____ LAST TEACHER'S NAME _____

WERE YOU EVER IN OUR EMPLOY? IF SO, WHEN? _____ WHAT DEPARTMENT? _____

IF ANY RELATIVE OF YOURS IS IN OUR EMPLOY GIVE NAME AND DEPARTMENT WHERE EMPLOYED _____

IS YOUR FATHER LIVING? _____ IS YOUR MOTHER LIVING? _____ WITH WHOM DO YOU LIVE? _____

DO NOT WRITE BELOW THIS LINE OR ON OTHER SIDE OF PAPER

DATE EMPLOYED _____	DEPT AND DISC NO. _____
POSITION _____	LOCKER NO. _____
SALARY _____	ENGAGED BY _____

EMPLOYMENT SLIP

NAME _____	DATE _____
ADDRESS _____	DEPT _____
POSITION _____	EMPLOYMENT MANAGER _____

The Section Manager or Head of Department to Whom This New Employee Is Sent, Will Endorse This Slip and Return It Immediately to the Timekeeper's Office

ENDORSED BY _____

EMPLOYES' AGREEMENT

New York, _____ 192__

It is hereby understood and agreed, that I enter the employ of *John Macy & Co* with the distinct understanding that my employment may be terminated by them on any day without previous notice. I being likewise at liberty to terminate this agreement in the same manner. I promise to observe all the rules of the store, and faithfully to perform whatever duties may be assigned to me, and agree to report to my superiors (should it come to my notice) the name of any person injuring or defacing the building or the property of the firm, or committing any act of dishonesty.

I also agree to become a member of the "Macy Mutual Aid Association" and I hereby authorize and empower the firm for me and in my behalf to pay the treasurer of the "Macy Mutual Aid Association" the dues of a member assessed upon me, subject to its regulations or any arrears thereof, and to deduct the same from any wages or salaries due to me at the end of any week.

To all of the above I fully agree, without any reservations whatsoever.

Witness:

Name _____

Address _____

Dept. _____

THE APPLICANT WILL NOT BE HIRED UNLESS THIS FORM IS PROPERLY FILLED OUT.

REFERENCE TO DEPARTMENT MANAGER.

This applicant is sent from the office of the Employment Manager Date _____

To see _____ Dept. _____

Position desired _____

Please answer the following and return to the Office of the Employment Manager. (Signed) _____

Satisfactory? _____

If not state why _____

Work to begin _____

Salary position is worth _____

Remarks _____

Signed _____

Department Manager

RECORD OF TRAINING AND CONTINUATION CLASS STUDENTS.

F. C. Exam.	{ Textile _____	Continuation Class Exam. _____
	{ Salesmanship _____	Period of Study:- From _____ to _____
Dept. Exam. _____	Remarks _____	

No memory can keep the details of a first-grade, city department store today. No man can know all the employees. Macy through its Personnel Department can do these things, because records and not memories are accurate. The duty of the Employment Department is to create a source of labor supply. This Department then selects those who are to be taken into the organization. This selection is made by means of personal interviews and mental tests. Of such sources as advertisements, Y. M. C. A.'s, employment bureaus, charity and social service associations, and recommendations by fellow employees, the last is considered the most valuable source. It builds up a morale based on friendship. The colleges and high schools furnish their quota. Often as many as fifty college graduates are in training in the organization. They are given a practical business training and prepared for executive and sub-executive positions.

The "Application for Employment" is the foundation of the personnel record. It includes the usual biographical facts, the names of four preceding employers, positions and time they were filled, and the kind of work done—if any, and the names of two references other than employers and relatives. In addition it gets data for future training by making a record of any previous schooling, the grade reached, and teacher's name. In the upper right-hand corner spaces are reserved for the psychological expert to enter the grades of his tests. On the back are spaces for the grades of all regular examinations to be passed later. These illustrations show the kind of facts the record folder will ultimately contain.

On the front of the application blank at the bottom of the page is a final form which will constitute the first

actual record of the employee, viz., date employed, position, salary, department and disc number, locker number, and the person employing him. This information is filed when the person is actually employed and takes his place in the store organization.

Below this space is a detachable slip to be sent with the new employee to the Department of Training where a member of the Reception Committee is introduced to the newcomer, and is escorted by the Reception Committee member to the assigned department and there introduced to the Section Manager or Department Head and the fellow workers.

The detached portion of the employment slip is endorsed by the Section Manager and sent to the Time Office, thereby notifying that office that the new employee has been officially accepted into his department.

The reverse side of the application form contains the employee's agreement which is the actual contract entered into with regard to the Mutual Aid Association as well as rights for terminating employment. It also presents a form to be filled out by the Department Manager, to whom the applicant is sent with the application.

The chief points are the queries: "Satisfactory" and "If not, state why?" This blank introduces the applicant to the department and gives the manager an opportunity to point out any special defect that he thinks will hinder the applicant as a member of this department. It gives another judgment or grading of the employee, and incidentally prevents department managers from complaining that persons are employed without the manager's judgment being invited. The last space on this page is to be filled out later as the employee's record under training is completed.

When the prospect has filled out the

PREMIUM FOR THE DETECTION OF ERRORS		CASHIER'S STAMP	
Dept. _____	Date _____	OR M. C. STAMP	
Detected by _____ Dis cNo. _____			
MARK X IN FRONT OF KIND OF ERROR			
	Merchandise Checkers' Premiums	Cashiers' Premiums	
<input type="checkbox"/>	Wrong Price	<input type="checkbox"/>	Wrong Figuring
<input type="checkbox"/>	Wrong Goods	<input type="checkbox"/>	Failure to Enter or Send Amt. Rec'd
<input type="checkbox"/>	Wrong Quantity	<input type="checkbox"/>	Failure to Extend Amount of Purchase
<input type="checkbox"/>	Error in Figuring C.O.D. Saleschecks	<input type="checkbox"/>	Failure to Finish Salescheck
<input type="checkbox"/>	Wrong Dept. Number	<input type="checkbox"/>	Wrong Dept. Number
Salesclerk's Signature _____		Disc No. _____	
Salescheck No. _____		<div style="text-align: right;">Section Manager</div>	
Serial No. _____			

Merchandise Checkers will receive TEN CENTS for each error detected.

The following list will constitute errors:

- Wrong Dept. Number
- Wrong Price
- Wrong Goods
- Wrong Quantity
- Error in Figuring C. O. D. Saleschecks

Section Manager must sign, and see that the Salesclerk who makes error signs this ticket in space provided. Section Manager to return this ticket to Merchandise Checker

Cashier will receive a Premium of Ten Cents for each error detected in the figures on saleschecks as follows:

- Wrong Dept. Number
- Wrong Figuring
- Failure to Enter or Send the Amount Received
- Failure to Extend Amount of Purchase
- Failure to Finish Salescheck

Section Managers will make out Premium tickets for Cashiers the same as for Mdse. Checkers, and return them to Tube Room. Cashiers' Premium tickets must be made out immediately after customer has left the Dept. Under no circumstances is a customer to be delayed because of error in Salescheck.

Audit clerks will receive Ten Cents for the discovery of errors of Salesclerks placing the wrong Dept. Number on Saleschecks.

R. H. Macy & Co.

application blank and is talking to the Employment Manager or one of his assistants, he is "sized up" as to fitness, ability, mental grasp, etc. After this interview the prospect is sent to the "Conference Office."

This important link in the system is conducted by an expert in psychology and mental tests. His grade in this test is put in the space reserved in the upper right-hand corner of the application blank as has been mentioned. If the interviewer's estimate and the psychological test do not agree, there may be a second test entered as above and at times even a third. If the disagreement is final, the applicant may nevertheless be employed, but the name goes on a special list for observation, and special instruction later. (The psychological test has failed in very few cases to point out the true value of the applicant.) After the mental test, the applicant goes to the medical department and receives a physical examination.

The character of this examination is shown in the reproduction of the blank.

The hospital staff consists of four doctors, four nurses, two dentists and a chiropodist. In a department store the condition of the feet has much to do with success and general health and contentment.

It is clear that the manila folder in the Record Room already contains valuable data on the future employee—his past record, his physical condition, and expert estimates of his mentality and fitness for a certain job.

The next step shows the successful solution of one of the many problems faced by personnel experts. There are people who secure employment in stores to get a chance to work a few days and then leave, perhaps with something stolen, or broken, as a souvenir. They naturally do not want

to give their real addresses. How then can the store be sure that they actually live permanently at the address stated? By the simple device of sending a post card to the address given, telling the recipient to bring the card with him when he reports for duty. This makes certain that the applicant regularly receives mail there and can be located. It was discovered that there was some discontent on the part of an applicant with the publicity which a post card from the store gave him especially if he were living at a boarding house where mail is scanned by many boarders. In view of this embarrassment it has recently been decided to send the post card enclosed in an envelope.

The newcomer is sent from the Employment Office to the Department of Training as has already been explained bearing the "Employment Slip" which is detached from the bottom of the application blank. Then the problem of fitting the employee into the store record system is faced.

The Department of Training notes the department for which the new employee is intended (say 110 as the Hardware Department is numbered) and then uses a telautograph—automatic handwriting machine—to flash the number (every department has its number) to the Controller's Office. The number written by the Department of Training is 110. The Controller's Office flashes back the employee's number, let us say 12. The new employee's number, thenceforth, is 11012. This tells us that the employee is in Department 110 and that his number in that department is 12.

The newcomer is now given two information booklets; one containing information regarding the merchandise carried in the department for which the employee has been selected; and the other booklet containing the general rules and regulations of the store, a

description of the bonus attendance system, employees' shopping privileges, opportunities for advancement through training and otherwise, schedule of delivery routes, and the store directory.

The problem is to get employees to read the rules and pay attention to them. Every executive knows the excuse: "I did not know it was the rule."

Such an excuse is automatically disposed of by making the new employee sign a receipt for the rule-book, including a promise to read it carefully. (This is filed away in his folder so that if he ever denies knowing the rule he may be confronted with his own acknowledgment.)

The receipt for manual reads:

Date.....

I hereby acknowledge receipt of one Merchandise Manual, the property of R. H. Macy & Co., loaned to me for use while in their employ.

I agree to be personally responsible for this manual, and to return it in good condition upon demand.

Name.....

Disc No.....

The Department of Training next telephones to the employee's department for a member of the "Reception Committee" to welcome the new colleague. Every manager knows how difficult it is to get an old employee to give the time, pains, patience, and courtesy needed to aid a newcomer to be assimilated into a large organization. Our store recognizes this problem, the problem of making new employees feel at home during their first few days of employment. The problem is almost completely solved by selecting certain of the older and more experienced employees, possibly two to five in each department, for the Reception Committee. The newcomer is introduced to a Reception Committee member who in turn introduces the new employee to his fellow workers, ex-

plains the rules, and shows him wash-rooms, lockers, the plan of the store, accompanies him to lunch the first day, etc.

The Reception Committee member is paid a dollar per person for this service. To avoid a possibility that a dishonest employee might get his friends to apply for work in his department so that he may make several dollars a week instructing persons who leave as soon as the compensation is paid, it is provided that this bonus will not be paid until the new employee has been with the store six days.

This regulation is an added incentive for the member of the Reception Committee to see that the new employee makes good at the very beginning. The Reception Committee member makes a report on the newcomer. This is filed in the manila folder of the Record Room.

All new salespeople are under observation for two months. This training we call preliminary training. The first month is given over to training in store system, store policy, store organization; the second month to training in the knowledge of merchandise and customers.

No instruction is given to employees on the first day of employment. This method was adopted because it was felt that training given the first day made the newcomer very nervous and ill at ease. Therefore, as already described, the Reception Committee takes care of the new employee during the first day. Training starts on the second day. Six one-hour periods are given to each sales clerk, two of which are demonstration periods on the selling floor. All sales checks issued by new sales clerks during the first two weeks of employment are sent to the Department of Training where they are carefully gone over in order to determine whether sales clerks are absorbing what

YEAR _____		
JANUARY	MAY	SEPTEMBER
FEBRUARY	JUNE	OCTOBER
MARCH	JULY	NOVEMBER
APRIL	AUGUST	DECEMBER

The Envelope 45

THE MONTHLY AND ANNUAL INVENTORY OF DEMERITS

Name _____		
Month _____		Disc No. _____
Date of Transfer _____		Disc No. _____
Date of Transfer _____		Disc No. _____
A		K
B	Late without excuse	L
C	Failure to use disc	M
D	Overtime at Lunch	N
E	Wrongly written addresses	P
F	Packed for shipping papers left off	R
G	B of I Reports	S
H	Manager's Office	
		Total number of demerits

R. H. Macy & Co.
HERALD SQUARE *Inc.* NEW YORK

New York,

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As soon as you receive this card bring it with you and leave it at the "Record Room" in the General Manager's Office, which is in the rear of the Main Floor Balcony. Your employment is not complete until the above is complied with.

Dept. No. _____

R. H. MACY & CO., Inc.

CARD CHECKING CORRECT ADDRESS

has been taught, and to relieve the Auditing Department from the unnecessary checking up of mistakes. At the end of the month the employees are brought back to the Department of Training for examination, having had an opportunity to apply on the selling floor what they have been taught in the classroom.

During the second month three lectures are delivered to each employee on general salesmanship and at the end of the second month an examination is given based on the information given in these lectures, also, on the information contained in the merchandise manual covering the particular department.

Next arises the problem of keeping a record of the mistakes of the employee. The chief mistakes concern the sales' records, sales checks, tallies, drivers' sheets, etc. To stimulate detection of mistakes, the cashier, merchandise checker and others in positions which enable them to detect errors, are paid a premium of ten cents for each error caught. The form filled in by the cashier is shown in the illustration.

ERROR SLIP

Disc No. Date.

Sales check badly written	
Tally badly written	
Address badly written	
C. O. D. error	

I regret the above error and promise to be careful in the future.

Signed.

But it is not enough to catch mistakes. The sales clerk must be kept from making them again. He is interviewed, and having been convinced of his mistake, signs an acknowledgment and promises to do better. This emphasizes the nature of the mistake and makes the employee guard against a recurrence.

The demerit report is used to record the various kinds of errors by months. These slips at the end of the month are filed in the employee's manila folder and new slips are made out for the coming month and placed in envelope form shown in one of the illustrations.

This envelope acts both as a container and as a record of total errors for the year. In short on looking at this envelope one can see exactly how many errors were made by the employee during the year, and if the details are wanted to show the character of the errors they are all inside the envelope. When an employee is being considered for another position, the executive has under his eyes every error the former has made since the day of becoming a real working employee. This may be called the negative side of the inventory—in a sense it tells what a man is not good for but that is something worth knowing.

But the ideal of our store is not to content itself with finding mistakes. It desires to take every employee and train him to do better work, to fit him for higher positions. In fact the work of the Department of Training is to develop the employee coming in at the lower rungs of the ladder, for the jobs at the top. To do this, training must be graded in such a manner that the employee may start in at any stage of business rank and find a training course ready to lead him to the next stage or level. The application of periodic mental tests and ratings is the

barometer which continually measures or inventories the personnel and tells us whether our standard is higher or lower as time goes on.

These reports from the Psychological Division of the Employment Department finally find their berth in the manila folders in the Record Room along with examination marks, demerit records, etc.

When we say development of employees through training, we include recreation and social service work. At Macy's training stands for general development whether it is teaching the executive to do his job just a little better or whether it is giving dancing lessons, gymnasium lessons, arranging for free legal advice or aiding financially such employees whose families are stricken with continuous illness

and misfortune of one kind or another.

It is not the purpose of this article to tell what the Training Department does in detail. That is another story to tell.

The Training or Development System at Macy's plus the knowledge of its personnel through records makes it possible for the organization to live up to the policy of filling all desirable positions from within the organization and thus building a personnel on a plane of square dealing, not on favoritism and lack of confidence in one's own product.

When the Salary Committee makes its six-monthly review it is the manila folder from the Record Room which gives the inventory of the employees under consideration for an increase in salary or promotion.

NAME		Position	When Employed	
Date	General Appearance	Height	Weight:-Max.	
Age	M. S. W.	Present		
Family History				
Past Complaints				
Rheumatism		Appendicitis		
Tonsillitis		Long Continued Cough		
Indigestion		Nervous Disorder		
Eyes	Ears	Nose	Headache	
Heart	Mouth & Throat			
Lungs				
Abdomen				
Reflexes	Blood Exam.		Blood Press.	
Nerves			Good	
Urine:-Alb.	Sug.	Risk		Fair
Orthopedic Deformity			Poor	
Remarks				

EXAMINED BY Dr.

FORM FOR PHYSICAL INVENTORY

BUDGETARY CONTROL AND ADMINISTRATION

BY J. O. McKINSEY*

BUSINESS administration is largely a matter of control—control and direction of the various factors involved in the conduct of a business enterprise. The business administrator has subject to his control resources of various kinds. The nature of these resources depends on the nature and volume of the operations of the business. In a small business the resources employed may be few in number and small in volume, while in a large business they may be both numerous and voluminous. In any case the business executive has at his disposal a certain amount of capital and a certain amount of labor, and it is his function to direct and control these to the end that a commodity may be produced or a service rendered. Business administration prescribes the method by which this control may be exercised in order that these resources may be used most efficiently and the commodity or service produced most economically.

It may be seen, therefore, that business administration is a problem of control—control of the economic resources used in the production of economic goods. But such control can be exercised in a rational way only when it is based upon accurate and comprehensive information. In fact, business control, and hence business administration, may be said to consist of the proper application of information correctly interpreted. It is the purpose of the present and subsequent articles to point out the nature of the information which is necessary for the

exercise of such control and the method by which this information may be obtained and used.

I

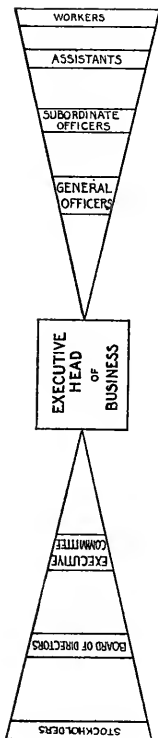
Control can be exercised only through individuals or groups of individuals, and information can be of value only when it serves the needs of those engaged in administration. In other words, business administration can be discussed only in terms of business organization. The failure to realize the relationship of business administration to business organization has caused the breakdown of many elaborately designed "systems of management."

Under present systems of business organization, the parties who exercise some influence in the administration of the typical business are quite numerous. The ultimate control of the business is vested in the owners, but in the modern corporate enterprise their control is exercised only indirectly. Most of their authority is delegated to a board of directors, who in turn delegate a large part of their authority to the general officers of the corporation. The general officers in turn entrust the execution of the policies of the business to subordinates, and these subordinates employ the services of assistants. Such a form of organization is illustrated graphically in the chart which follows.

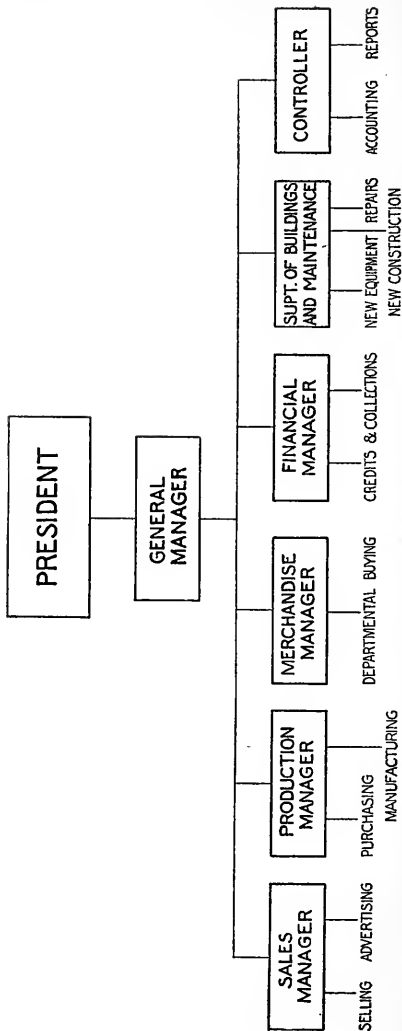
II

In the corporate type of business organization, the ownership of the

* With the firm of Frazer & Torbet, Certified Public Accountants, New York City.



RELATION OF EXECUTIVE TO STOCKHOLDERS AND EMPLOYEES



FUNCTIONAL MANAGEMENT CHART

business is vested in the stockholders. As stated above, ultimately the executive control of the business also is vested in the stockholders, but as a matter of practice this control is exercised very indirectly. The stockholders pass upon only a few of the policies of the business. The remainder are left to the jurisdiction of the board of directors which is chosen by the stockholders. The direct control of the stockholders is usually limited to the following:

1. *Protection of Property Interest.* The stockholder invests in the corporation for the purpose of securing an income from the use of his capital in the business. On account of the indirectness of his individual control, he desires reports which will show that his property interest is being protected, and, in case he realizes that it is being impaired, he may exercise his right to direct actively the operations of the business. Of course, such action is possible only where there is a community of interest with the consequent co-operation of a majority of the stockholders.

2. *Maintenance of Dividend Rate.* As stated in the preceding paragraph, the stockholder expects to obtain an income from his investment, and this income he obtains by means of the dividends declared by the board of directors. He desires consequently that the dividend rate be sufficiently high to afford him a proper return on his investment, and that this dividend rate be maintained regularly if possible. He desires, therefore, to be consulted about a change of dividend policy. The stockholder's chief interest in the board of directors is their ability to protect his property interest and to maintain a fair and adequate rate of dividend. So long as this is accomplished, he does not seek to interfere in the administration of the corporation.

3. *Financing of Extensions.* If extensions are to be made on a large scale, it may be necessary for the board of directors to appeal to the stockholders to contribute additional capital or to obtain their permission for the issuing of additional stock or bonds. It is within the province of the stockholders to reject such plans, but this authority is exercised rarely.

III

The board of directors, although responsible for the administration of the business, do not as directors participate in such administration. They content themselves with outlining the general policies to be followed and then delegate the execution of these policies to the general officers of the business. The method by which the board of directors exercise control may be indicated by the following:

1. They select the general officers of the company and delegate to them certain administrative duties.

2. They outline the general policies of the business for the guidance of these executives, to the end that the desires of the stockholders may be realized; that is, that their property interests be protected and a reasonable dividend rate maintained. To this end they may set up a dividend rate which is to be maintained and judge the efficiency of the general officers by their ability to make possible the maintenance of this rate.

3. They consider and approve, modify, or reject the general plans submitted by the general officers. Such plans include the estimates which the general officers present to show their proposed accomplishment during the coming period.

4. They receive reports from the executives of the business which show the degree of success which they have

attained in carrying out the plans which have previously been approved. Such reports, if properly prepared, show the success of each principal executive, as well as the success which has attended the efforts of the executive staff as a whole.

5. They may award bonuses or increases of salaries to the executives on the basis of their performance, and thus encourage efficiency and initiative.

Such are the duties of the board of directors in most cases. In a corporation where the general officers of the corporation are members of the board, they may exercise more direct control than that indicated. It is questionable, however, whether in this case the general officers are not acting in their capacity as executives rather than as directors. It is not feasible or desirable to consider here in detail the administrative functions of the board of directors. It is sufficient for our purpose to see that the execution of the administrative policies of the business is left to the general officers of the business, and it is to a consideration of the methods by which they accomplish their execution that this discussion will be devoted henceforth.

IV

As indicated by the graph, it is customary to have in each business some chief executive who is responsible for the administration of the business. In the case of a corporation this executive is usually the president, although in some cases the president may be subordinate to the chairman of the board of directors when the latter assumes active executive duties.

In a small business, the president may supervise and direct all of the administrative functions of the business. In a business of any considerable size, it is impossible for the execu-

tive head actually to direct, much less actually perform, the work necessary for its administration. Other officers must therefore be employed who will assist in the formulation and execution of the administrative policies of the business. The number of such officers who may be employed and the duties which they may perform will depend to a considerable extent on the nature of the operations and consequently the functions of the business. The number and nature of such functions vary from business to business. There are certain functions, however, which are common to all businesses. In every mercantile and industrial business, at least, sales must be made, the goods or services sold must be produced or purchased, the plant and equipment which are necessary for carrying on these operations must be secured, their maintenance provided for, the funds necessary to finance these operations must be secured, and finally the accounting and statistical information necessary to exercise control of all these operations must be obtained.

Since it is necessary that these functions be properly performed, officers should be appointed who are proficient in particular functions and that responsibility be placed accordingly. In pursuance of this policy the president or general manager may have subordinate to him and reporting to him:

1. A sales manager, who is in charge of the marketing of the products or services upon whose sale the business depends for its chief revenue. The sales manager may also have subordinates, as for example, one in charge of domestic and one in charge of foreign sales; and subordinate to or co-ordinate with him there may be an advertising manager and his staff.

2. A production manager in a manufacturing business, who is responsible

for supplying through production the amount of the product or service necessary to supply the demands of the customers. The purchasing of the materials used in production would be in charge of a general purchasing agent who might, or might not, be subordinate to the production manager, but who in any case must co-operate with him.

3. A merchandise manager, in the case of a trading business, who supervises the purchase of the goods to be sold. In a large business he would be assisted by various subordinates usually known as departmental buyers, who are specialists in certain types of merchandise purchasing.

4. A financial manager, who is responsible for the formulation and execution of the financial policy of the business. Usually he is not given final authority in cases of material importance, but it is his duty to provide the information which will serve as a basis for formulating the financial policy of the business and to execute that policy after it is formulated. Subordinate to the financial manager, who is usually called the treasurer, there may be a credit manager and a collection manager. In any case, there must be close co-operation between the financial manager and those who guard the credits of the firm.

5. A superintendent of buildings and maintenance, who is responsible for the maintenance of the present equipment and the construction and installation of new equipment. It is not possible entirely to centralize the control of equipment, since it is so vitally connected with the operations of several departments. The requisition for new equipment for manufacturing purposes may originate with the production department, and its construction may be carried on by this department. Other departments may

originate the requisitions for the purchase of equipment for their particular department. It may not be feasible to have an executive who controls equipment, as the production manager controls production. It is possible, however, for the superintendent of plant and equipment to have general supervision and *functional* control of all plant and equipment.

6. A controller who has supervision of the accounting records and the preparation of accounting and statistical reports, and is responsible for the interpretation of these reports and the recommendation of methods of procedure based on this interpretation.

The foregoing list of functional managers who assist the president or the general manager in the formulation and execution of the policies of the business is intended to be suggestive rather than inclusive. The ones mentioned are those who are necessary to supervise and control the functions which are common to all businesses.

In a small business, the same manager may be responsible for two or more functions, but this does not destroy functional responsibility; it means only that this manager is acting in a dual capacity. On the other hand, in a large business it may be necessary for the purpose of control to subdivide administrative duties to a greater extent than that provided by the broad functional classification previously given. Such a division may be made along various lines. It will suffice for the present discussion to indicate a few of the possibilities.

In a business which produces or sells only a few articles the organization for control may be based on the product classification. For each product sold there may be a separate sales executive, all of whom are answerable to the general sales manager. In some cases there may be a separate sales

manager for special groups of commodities, and then the miscellaneous commodities are grouped and placed under the supervision of a single executive. In this case there is an organization based on a group classification instead of a product classification. In the same manner the purchasing department and the production department may be organized on a basis of a product or a group classification of commodities. In some cases the group classification of commodities may give rise to a departmental organization with departmental heads who exercise general administrative functions under the functional control of the general officers. For instance, the departmental head may be responsible for the purchases of his department under the supervision of the merchandise manager, and he may be responsible for the sales of his department under the supervision of the general sales manager. In the same manner he may have control of the preparation of certain memorandum records and accounting forms under the functional supervision of the controller.

If a company has branches, with a separate branch manager in charge of each branch, a further illustration is provided of an executive who has line authority over staff functions over which the general officers have functional control. For instance, the head bookkeeper of the branch is under the executive control of the branch house manager, but he is under the functional control of the controller. In other words, the controller will prescribe the accounting methods which he is to follow, but the branch manager is responsible for seeing that the bookkeeper obeys the orders and directions of the controller. If the branch is a selling agency, the branch manager will be answerable to the line authority of the sales manager of the company, but

he will be subject to the functional direction of the staff officers, such as the controller, treasurer, and others. If the branch is a production unit, the branch manager will be under the line authority of the production manager and subject to the functional control of the remainder of the staff.

In the case of subsidiary companies, the functional control of the general staff officers may be more indirect, since each subsidiary may have developed its own staff, but if proper co-operation and co-ordination are to exist, the functional authority of the general staff must be recognized and exercised. Otherwise the different subsidiary units will work at cross-purposes.

VI

It has been stated previously that the following functions are common to all business:

1. Sales
2. Control of stock investment
3. Production or purchase planning
4. Plant maintenance and extension
5. Financing of operations

Since these functions are found combined in the single business unit, it is fair to suppose that there must be a close relationship between them. A very brief study will show that there is so close an interrelation of these functions that it is impossible to perform one of them without the co-operation of the others. It is true that some businesses emphasize one of these functions and other businesses emphasize another, but in every business each function must be considered. A few illustrations of this interrelationship will make this clear.

Goods are purchased or produced in order to be sold. It is unwise and unprofitable to purchase or produce more goods than can be sold within a reasonable time after their purchase or

production. To do so results in tying up capital in a non-income-producing investment, for excess inventories yield no profit. Profit is made from sales and not from purchases. A second danger arising from this procedure is the deterioration which may take place in the surplus stock due to time or obsolescence. It is obvious, therefore, that wise administration will take into consideration sales expectancies in planning purchases or production. On the other hand, it is unwise to sell goods in excess of the possibilities of supply. To sell more than can be purchased or produced leads to an unnecessary expense, both in securing the sale and in handling the inevitable complaints which will arise from a failure to fill orders. An additional loss may arise from the ill-will of the customer which may be incurred by the failure to meet promises. It is better to refuse an order in the beginning than to accept the order and fail to satisfy it. Many firms have lost prestige during the past two years by failing to realize this. It is necessary, therefore, to consider production or purchasing possibilities in planning the sales campaign. In other words, the sales function and the production function are so closely interrelated and interdependent that they must be considered jointly in planning executive policies.

In a manufacturing business, plant and equipment are essential to the production of goods, and in considering increased production the possible increase in plant and equipment requirements must be considered. But the quantity of production is determined by the volume of sales, so that in the end the sales campaign determines the plant and equipment program. The relation between these two functions can be easily seen. Loss will result from the sale of more goods than the present equipment can produce, or more than

it is possible or profitable to purchase equipment to produce. In this connection three questions must be asked:

1. Can the desired amount of goods be produced with the present plant and equipment?
2. Can additional plant and equipment be secured in time to produce goods to supply the present demand?
3. Can such plant and equipment be secured and operated profitably?

It is equally unwise to secure plant and equipment beyond that needed to satisfy the present or the anticipated demands of customers. Consequently the plant and equipment program is closely related to both the sales and the production program.

The making of sales, the producing of goods, and the securing of equipment, all involve an expenditure of funds. All these operations must be financed, and they can be carried on only to the extent to which the financial resources of the business will permit. It is unwise indeed for a business to plan a sales campaign with the consequent production requirements without considering the financial possibilities of the business. A lack of co-ordination of the sales and production programs may lead to loss, but a lack of co-ordination of the various programs of the business with its financial program will lead to bankruptcy.

The foregoing illustrations point out the interrelationship of the primary functions of the business, but within the group of activities included in each function there is an interrelation which must be considered. Emphasis has been placed upon the desirability of not producing beyond sales requirements, because of the consequent loss arising from the capital invested and the possible deterioration of the goods. There may be other factors, however, which make it desirable to produce beyond sales capacity, at least for a

certain period of time. For instance, if the sales fluctuate from period to period, it may not be desirable to have the production fluctuate accordingly. There are several reasons for this, one of the principal being the problem of maintaining a proper labor supply if wide fluctuations in production take place. If production fluctuates, it is necessary to discharge laborers whom it may be difficult to replace later, especially in the case of skilled labor, or it is necessary to retain them and not employ them full time, which is undesirable and uneconomical, because of the increased overhead resulting therefrom. It may be preferable to maintain a uniform production, and thereby accumulate in the period of slack sales an inventory which may be used to meet the excess demands during the rush period. The cost of the excess capital tied up in the inventory may be less than the loss which would result from fluctuating production. This is but one illustration of the interrelation of the various "sub-functions" of the business. Many more will undoubtedly occur to the reader.

VII

A discussion of the co-ordination of functions resolves itself into a discussion of the co-operation of "functionaries," and a brief study of the prevailing conditions in large business establishments at the present time will show that such co-operation is the most urgent need for effective business administration. A conservative estimate would attribute 75% of the business failures of the present time to a lack of co-ordination of the functions of the business, due to a lack of co-operation on the part of the functional officers. That this lack of co-operation is not intentional, and is due primarily to a lack of information which would

make such co-operation possible, does not change the situation.

It is quite easy to see how the present situation came to be. When business organization was simple, the business enterprise small, and its activities local, the owner, who was also the manager, was able to exercise direct control of all the functions of the business. He acted as the executive head of each of the functional departments of the business. He was sales manager, production manager, treasurer, and controller, all in one. Because of this condition, he was able to bring about the proper correlation without difficulty. In his capacity as sales manager he knew the sales which he deemed possible, so that he knew what purchases to make when he was acting as merchandise manager or purchasing agent. As treasurer he knew the funds which were available, so that he could make his sales and purchases accordingly. When business organization became more complex, and the business unit increased in size, the executive was forced to delegate certain of his duties to assistants and the present plan of functional organization developed with a separate executive in charge of each function. The change in conditions is apparent. The sales manager devoted his entire time, thought, and energy to the securing of sales, and he had no direct contact with the production department. The production manager became engrossed in the problems of production and had no means of becoming familiar with the operations of the sales department. The treasurer secured the needed funds as best he could and had little information upon which to base his plans. And thus the co-ordination which formerly was brought about by the centralization of control in the hand of the chief executive was lacking.

VIII

In the past few years the functional staff officers of many large businesses have realized the necessity for the co-ordination of the activities of the various departments of the business and have attempted to bring about this condition by studying past results and trying to correct the worst evils. The production manager may find that on certain articles large inventories have been carried; accordingly he plans to cut down the production on these articles during the coming year and thereby reduce these inventories. The treasurer may find that during certain months his bank balances are very low because of the demand on the part of the purchasing or production department for funds; consequently he may plan to increase his bank loans at that time during the coming year. In the same manner each department may study *its* past activities and plan to correct the difficulties of the past. In some cases the departmental heads may go farther and study the past operations of the other departments so as to see the cause for the difficulties encountered in their own departments.

This method of attacking the problem accomplishes some results, but even if carried out very completely, which usually it is not, it is subject to two serious objections:

1. It is basing future plans on past results and not taking into consideration possible changes. This is almost sure to lead to inaccuracies, since a business does not remain stationary; it either advances or goes backward.

2. It is a negative rather than a positive program. It plans to try to meet the demands of *last* year. Its goal is to try to do *this* year what it should have done *last* year. It is only an attempt to reach a *past* goal, not to reach the *new* goal, which should have been set for this year.

It is contended, therefore, that a new

method and new policy from that followed by most firms at present is needed—a policy which will provide correlation and will compel progress. Such a policy will involve the dealing with future plans, rather than past results, although plans must of necessity be formed in the light of results. It has repeatedly been emphasized that business administration is a matter of control. Control necessitates the use of estimates. The past is gone and cannot be changed; it is only future operations over which control can be exercised.

Modern business administration tends more and more to become a standardized routine. In a large organization such standardization is essential to the maintenance of a unified business policy, to the co-ordination of the activities of the several departments, and co-ordination means subordination to a common head. Business men are gradually coming to realize that this can best be accomplished by the formulation of plans submitted for approval in black and white, if indeed it can ever be accomplished in any other way for long. Not that plans have not always been made; but that they have commonly been carried around in some man's head. But it is coming to be less and less possible to maintain a business organization that depends upon the intuitive faculties of a single individual, developed by years of experience, these faculties perishing with the individual. The organization must be independent of any single individual in it. All of which goes to say that there should be some systematic method of gathering information from the past and of formulating on this basis plans for the future and of subsequent reporting to see how these plans have been carried out. Such an accounting and statistical organization we may call a budget system.

IX

It is the purpose of the present article to emphasize the following:

1. It is the function of business administration to prescribe the means and methods by which control may be exercised over the resources of a business, to the end that they may be used in the most efficient manner in the production of a commodity or the rendering of a service.

2. Such control is exercised through a functional staff organization which exercises and directs the activities of the functional units within the organization.

3. The activities of the different staff officers and their assistants are so closely interrelated that there must be a proper co-ordination of these activities.

4. Such co-ordination necessitates that each functional department of the business present for consideration of the other departments an estimate of its operations for a certain period of time, showing its anticipations and its possibilities, and that these estimates be co-ordinated into a well-formulated program for the business as a whole.

5. That based on this program a "budget" for each department will be made and that this budget will serve as a goal to be attained and as a standard by which to be judged.

It is the purpose of subsequent articles to discuss the preparation of the various departmental budgets and the method of controlling their execution.

SALIENT FACTORS IN SALES CONTROL

BY EDWARD H. GARDNER *

AT the apex of the pyramid representing the chart of the sales organization is the controlling executive, the sales manager or vice-president in charge of sales, while at the foundation stand the salesmen. How far down the pyramid should the primary control extend? What factors should be presented in reports that reach the desk of the department head, and what factors should be supervised by subordinates? What factors, in other words, are basic enough to warrant the attention of the chief sales executive, and in what form shall they be presented in order not to clog his mind with detail and yet to give him an accurate picture of the activities and tendencies of his department?

The full answer to these questions would involve a grasp of all the problems of sales administration, and of its philosophy—if such there be. Only a suggestive outline indicating the chief problems can be given here. The marketing machinery of American business has been rapidly adapted to the task of intensive rather than merely extensive selling and has taken on a variety and complexity calculated to baffle the most expert engineer.

Certain organizations functioning along traditional lines for long periods rely largely on the initiative and responsibility of subordinate chiefs, supreme in their fields, who transmit to their superior only bare records of a few major operations. As new functions arise produced by changed conditions they are absorbed by these subordinates, who carry in their heads the

record of impressions made by direct contact with the field, often unaware of the new knowledge they have acquired and unconscious of the necessity for passing it on to the officer above them. The merchandising sense of these men is in fact the control of most of the operations of the department. The problem of determining the factors underlying the business is the problem of analyzing the content of their minds and separating the knowledge thus gained into specific items, then to be used in organizing a system of control.

Other organizations, newly established to distribute novel merchandise fashioned to meet needs that our fathers knew not of, appear created from the top down, the general scheme of the marketing operation being worked out by an individual, the functions being largely interpreted by him and allotted to the men by whom he surrounds himself. The problem of building an organization which is able to function without the constant supervision of one man is the problem of reducing control to reasonable limits.

Sales operations being less tangible than some others yield less readily to the systematizing intelligence, and the establishment of standard practice in sales control may yet be a long way off. Sales managers who operate mostly on a "hunch" are still plentiful and men of this type will have to be cross-bred with mates of a more scientific habit of mind, and the process repeated for some generations, before the progeny will exhibit the desired combination of sales genius and sound

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statistical knowledge. It is to be hoped, however, that the virtues of the sire do not disappear in the offspring, for however carefully the modern intensive sales campaign may have mapped each foot of territory and counted every unit of man-power and pound of materials, it finds as much need as ever for the strategy developed in the old days of open warfare.

The time will never come when tables of figures will take the place of brains. Records in themselves are of value only when utilized by the interpreting intelligence, and "sales sense" will always be as much a factor in disposing of the year's output as military genius is a factor in manipulating the enormous scheme of modern warfare so as to bring final victory.

It requires no argument, however, to prove that a system of control for sales operations is as necessary as a system of records for an army. The supplies for the A. E. F. were proceeding overseas without reference to priority of need until one man in Washington developed a set of blueprints that showed at a glance the quantity of materials already in France, in transit, or ready for shipment. Before that time the information had been more or less available but was not in such form as to be readily controlled.

Success in sales operations depends less—to leave our military figure—on the large chances of virgin territory, where boldness was the chief equipment of the pioneer and a wealth of natural resources yielded rich finds to the crudest methods, than on scientific analysis of the location of markets and a precise economy of means to reach a predetermined goal.

The problems of sales management today are more intricate than those of the former generation. The intensive cultivation of territories already noted

and the pressure of competition have forced the development of new methods, so that a greater variety of means lies ready to the hand of the sales executive, and his knowledge of possible technique has been vastly increased. The great variety of types of sales organization may be thought to make impossible any general statement as to basic factors in sales control. The problems of a branch house organization, for example, are not those of another type. But possibly common ground can be discovered for a suggestive outline that will cover the needs of most sales organizations.

The sales manager deals, roughly speaking, with men, money, products, and territories. More than one of these elements may enter into any one problem which is large enough to be termed a basic factor in sales control, so that no accurate grouping of factors is probably possible on this fourfold basis, but the four elements may be serviceable to remember in order that the manager may not overlook any vital factor.

Control of personnel is regarded by many managers as the chief factor to be considered. Analysis of the requirements of each position in the organization, methods of personnel selection for these positions, a means of education for men already in the positions and for men who are being prepared to occupy them, are the three keys to personnel control.

To work out methods adapted to the organization and to decide to what extent these methods must come within the observation of the chief sales executive is a nice question. One element not to be overlooked, in the estimation of some executives, is the fact that no system of control will atone for poor quality in the individual. To realize the importance of a position and to place in it a man competent to

assume its responsibilities is the task of first importance, for when an inferior man is in a position no matter how carefully he is watched he will get into difficulties faster than the executive can get him out of them. Haphazard selection of personnel is the worst foe to adequate control.

The tabulation of actual sales, presented according to periods of convenient length, is naturally the chief sales record. It is commonly arranged so as to show sales by departments and by items, and to indicate sales made in different territories and by individual sales divisions or salesmen. The same control record may show, for purposes of comparison, the sales of the preceding year similarly divided. The degree of detail, and the manner of presentation in the tabulation are widely different according to the experience and interests of various businesses. So likewise will vary the manner in which sales made in various ways, such as house sales and mail sales, are credited to departments and individuals—a very pretty set of problems in themselves.

A third factor in control is the record of sales expense shown by its chief components. This may be compared with actual sales and may be prorated according to departments and items, and according to territorial or other divisions of the sales force. The questions as to what items are properly considered sales expense and what should be allotted elsewhere, and the question as to how expense should be prorated, provide ample field for discussion. Parallel to the record of sales expense may be shown the expense for the preceding year.

The budget of anticipated expense will stand in the minds of many as the central fact in the system of control. Such a budget cannot be left to general estimate but to be of value must rep-

resent a combination of carefully prepared details. The figures of this budget can properly be shown on the same record as the figures of actual expense.

The budget of anticipated sales is a fifth basic factor in sales control. The determination of the budget may involve market analysis, comparison of former sales, estimate of business conditions, estimate of possible production or purchase, and a great number of factors the consideration of which calls for the widest experience and the keenest acumen.

When distributed among individual salesmen as quota, for purposes of stimulation, the budget of anticipated sales becomes an element in another factor of sales control which may be named the control of sales effort. The proportion of gross sales assigned to each salesman is not the only goal which the manager wishes to set before him, but he is concerned also to stimulate his attention to classes of merchandise that are more difficult to sell or on which the profit is greater. It is likewise recognized that the salesman, as the emissary of the house, has more complex responsibilities than merely selling goods; he has to "sell" the policies of the house, to "sell" advertising and dealer helps and educational programs, all of which make for more secure sales in the future but do not swell the immediate volume of his sales. Accordingly, by a manipulation of compensation, as for example by a "point system" which provides rewards for various desired activities, the sales executive controls the quantity and kind of sales effort of his representatives.

The establishment of sales quotas is intimately associated with the allocation of sales territories, because one of the bases of reward is the amount of business that a territory will produce.

Evidently the man who gets business from a rich field should not be compensated at the same rate as one who has only a poor field to cover. But control of territories—if we may give this name to a seventh factor—involves not only salesmen's compensation, but analysis of principal and subordinate points of distribution and the territory which may be most easily controlled from these points. Determination of territories from this point of view is based upon the geography of natural barriers, such as mountains, or natural channels of trade, such as river valleys; upon population, freight and express rates, speed with which localities may be served, amount of business justifying carload shipments, and general trade tendencies, such as the traditional movement of business toward certain centers in preference to other centers, conditioned by historical development. A vast amount of statistical data can go to the preparation of an adequate system of control of territories.

Control of advertising, with all its branches, follows much the same lines as control of sales expense. It, likewise, can be budgeted under many subdivisions and can be compared with previous records; and also there is much variance of practice as to the items placed under this head.

The reports of the credit and collection departments are of interest as indicating not only the direct cost of their operations, [but also the effect of their policies on sales and the effect of certain sales policies on collections.

In connection with the relation of production to sales there are certain possible control factors not so clearly defined as the foregoing. Control of quality of product is one in which the sales executive has a vital interest. All tests for quality, both initial and continuous tests, affect directly the

success of his operations, and his means of information on this head cannot be slighted. There is a continuous warfare between the control of quality and the control of production cost, in which the sales manager must help to hold the scales of judgment for it is he who can determine what quality the market demands and at what price it is possible to sell.

Control of kind and variety of product, while closely related to estimates of volume of sales in different branches of production, may be a subject of too great detail to justify his attention; but on the other hand, it is through his department in all probability that essential information flows bearing on the adaptation of the product to the market and the necessary changes from time to time to fit existing demand.

The sales department is likewise interested in correlating production expense with sales expense, inasmuch as by the application of sales effort the curve of production expense may be flattened out. New markets or new products suggested by the sales department may keep the factory employed so as to reduce production cost, and so as to meet competition.

Control of price involves on the one hand price-making, and on the other, the maintenance of sale and resale prices. Both sides of the matter require continual information both to and from the manager's desk, and are capable of reduction to systematic procedure.

The progress of sales organization has successively given definite shape to a host of elements that at first were but vaguely grasped; and so advancing technique in the field may reduce to specific and manageable form factors that are perceived to lie within the sales executive's scope but that have not yet been brought within a formulated control.

NO PAR VALUE STOCK

BY THOMAS CONYNGTON*

THE great advantage of the corporate plan of organization is that many persons not actually engaged in the particular business may invest money in the enterprise and yet not incur partnership liability. This end is accomplished by dividing the amount of capital stock into shares representing investment, each of which entitles the holder to a vote for directors, a share in the dividends, and a share of any assets remaining upon dissolution. All the shares are of some equal amount, usually \$100 each, though in most states other values are allowed. In some the shares may be as low as \$1 each. Each investor receives one or more certificates showing how many shares he owns, and their par value. The par value printed on the certificate is, or rather was supposed to show, the original amount per share invested in the corporation by the first holder. Later, if profits are made, dividends of proportionate amount are to be paid to the holder of each share and if the corporation dissolves, the assets, after debts have been paid, are to be distributed equally among all the shareholders in proportion to their holdings.

The plan has worked fairly well, and still works satisfactorily in what are called in New York law "moneyed corporations," that is, in banks, trust companies, and the like, where the money itself is used as the mechanism of operations. It works well because money does not deteriorate in the course of business but remains intact. Stock in such corporations represents

an actual investment that exists unimpaired.

In other corporations it has not always worked so well. In manufacturing establishments the machine investment does deteriorate, depreciate, and become obsolete. In mining corporations the original body of ore diminishes as the work progresses. In both these cases, careful bookkeepers set aside a portion of the profits each year to form a sinking fund to replace the impairment of the original capital. But nevertheless, in many such corporations no sinking fund provision is made and the book value of the shares steadily depreciates as the corporate business progresses. In mercantile ventures the vicissitudes of the business impair the capital—in fact, initial expenses are usually larger than expected—and in the ordinary corporation at no time after beginning does the original amount represented by the capital stock remain intact. From these facts it is argued that in all such ventures it would be better that the shares, being uncertain in actual value, should have no par value but should merely certify that the owner is entitled to a proportionate share in the profits, and in assets on dissolution.

It is probable that the theory of no par value shares originated with the so-called "founders'" shares that are commonly used in English promotions to represent the speculative and contingent interests in their enterprises. A recent work on corporate finance describes these shares as follows:

In Great Britain it is a common practice to compensate the organizer of a corporation by giving him a final claim on earnings

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which is valid only after all the claims of those who have furnished capital have been fully met. The shares which represent this claim are variously known as "founders'" shares, "management" shares, and "deferred" shares. Although this practice is frequently condemned, it seems at least as defensible as the custom in the United States in accordance with which the promoter of a corporation retains by ways of compensation, as much as he can of the common stock. Deferred, management, or founders' shares in England are usually of very small par value—most commonly, one shilling per share.

In case the corporation succeeds in fulfilling the expectations of its organizer, the founders' shares may come to receive large dividends and to possess a high market value altogether out of proportion to their nominal value. Indeed, there are instances in which separate companies have been formed in order to hold the founders' shares and distribute interest in them in a more convenient manner.

A slightly different plan was followed by the holders of the founders' shares in the original Suez Canal Company. There were 100 of these shares which were of no par value but which were entitled to 10% of the surplus profits. These 100 shares were divided into 100,000 and were sold on the open market. The customary arrangement is that founders', management, or deferred shares shall take one-half the profits remaining after the ordinary shares have received a given rate of dividend.¹

II

It will be found on analysis that most business ventures require two essential things. They must have (1) the use of capital and (2) the application of business skill and initiative in varying degrees. Thus, in probably a majority of business enterprises we have:

First, the investment interest of those who have paid in cash and whose investment is represented by full-paid stock.

Second, the contingent interest of those who have devised and promoted the enterprise and who probably take an active part in the management.

In banks and other moneyed corporations the investment interest predominates, and those with the largest investments are usually the officers and managers of the company and are paid both for their investment and business risk by their salaries and the dividends upon their stock. In ordinary business corporations the case is different, and for many years past those who have contrived or originated the corporate plans, who have undertaken the management, have always felt that if successful they deserved some reward for their business initiative over and above the return on any personal cash investment they may have made. This has seemed but fair and has usually resulted in issues of stock that really represented only this contingent or residuary interest in the ultimate success of the enterprise.

The first step in the attempt to achieve this end was to divide the stock into preferred and common stock. Those who invested actual cash and paid par value were given preferred stock, which gave them the first opportunity at any profits and at assets in case of failure, and usually if the corporation was at first unsuccessful, the right to accumulate a specific amount of annual dividends to be paid in subsequent years when the corporation had become successful and could safely declare dividends.

Those who invested no cash but, whose initiative and business acumen led them to organize and promote the enterprise took common stock for their services. If the venture was successful, the common stock became valuable and the promoters were adequately rewarded.

The issuance of stock in these shapes

¹ Lough, W. H., *Business Finance*, p. 83.

made the common stock much less desirable and it was accordingly often recklessly issued for inventions, for contracts, and for various species of property that in the optimistic judgment of the original corporation directors might be equal to the value of the common stock. If common stock issued in this manner had remained in the hands of the parties to whom it was originally issued it would not have been so objectionable, but in many cases it was sold to the public at less than par. Then later when the corporation got into trouble, the purchasers sometimes had to make good the difference between what they paid and the printed value.

Transactions such as these involved also some curious and not altogether admirable entries in the books of account, and the so-called "good faith" of the directors who authorized the issuance of such stock was in many cases open to question; but unless the deal were altogether "too raw" it would pass the courts, and as between those who understood it no one was wronged.

The trouble comes when it is "unloaded" on the ordinary public, who never have understood the creation of the so-called "treasury stock" and who always imagine that to buy a stock certificate marked \$100 for \$50 or \$60 means that somehow they have made or are going to make a lot of money.

As a matter of fact, many of the stock-selling schemes which have drawn so much in real values from those who cannot afford the loss, have owed most of their effectiveness to the use of the dollar-marked stock certificate. A \$100 share of stock at \$50 sounds like a bargain. . . . The purchaser should know, and if he stops to think, does know, that the certificate marked \$100 may be worth \$100 or may be worth more, or less. He should investigate for himself and find out the real value of the dollar-marked stock certificate. In practice

he usually does nothing of the kind. In many cases, he cannot; in other cases, he will not. He may doubt the accuracy of the value mentioned on the stock certificate, but inevitably he is influenced thereby and frequently influenced to his injury.²

The better lawyers, accountants, and business men have not been satisfied with the workings of this system and objected to the abuses and frauds it encouraged. To save its advantages and prevent its abuses, and to provide a means whereby the speculative or contingent interest in business ventures could be honestly recognized, the plan of no par value shares was devised.

In New York the matter of authorizing no par value shares was first agitated before the New York State Bar Association many years ago, and a committee report made early in 1892 suggested capital stock without money denomination. Fifteen years after this, in 1907, the Bar Association committee, consisting of Victor Morawetz, Francis L. Stetson, Edward M. Shepard, and later, Louis Marshall, devised a bill which was passed by the New York legislature that same year. Unfortunately, this was vetoed. The same bill, with some changes, was brought up again and passed April 15, 1912. Since then it has been in continuous effect in New York, and many solid corporations have been incorporated and authorized to issue this kind of stock.

The growth of this form of stock issuance in the country at large is evidenced by the following schedule showing which states have followed New York and when each authorized the issuance of shares of no par value:

1916 Maryland
1917 California, Delaware, and Maine
1918 Virginia
1919 Illinois, Pennsylvania, New
Hampshire, and Ohio

² Conyngton, Hugh R., *Financing an Enterprise*.

1920 Massachusetts, New Jersey, Rhode Island, West Virginia, and Wisconsin

At the present time stock with no par value is being used for a large proportion of the important incorporations of these fifteen states. Some of the most representative of these no par value stock corporations are, Kenne-cott Copper, Columbia Graphophone, Consolidated Textile, Cuba Cane Sugar, General Motors Corporation, Otis Elevator, Loew's Incorporated, Radio Corporation of America, Sinclair Consolidated Oil Corporations, United Retail Stores, Wilson & Co., Inc., and the Vanadium Corporation. Almost every line of business and industry is represented among the no par value share corporations.

The probabilities are that the other states in the Union will follow the example of the fifteen states mentioned; and it would appear from the progress made in securing laws authorizing stock with no par value in the most important states of the Union, and its use by corporations of unquestioned solvency and business repute, that this form of stock is likely to be a permanent feature of our modern corporate system and that all business men will require a clear understanding of its function and advantages.

In an article published in *The Harvard Law Review* for June, 1913, Victor Morawetz, one of the distinguished lawyers who drafted the New York statute, expressed himself as follows:

The policy of the New York statute is sound. It recognizes that shares in a corporation represent only aliquot interests in its capital, whatever that may be, and that their nominal or par value is no indication of their actual value or of the actual capital of the corporation. It requires the amount of the actual capital of a corporation formed under the law to be stated in the certificate of incorporation, and imposes a severe

penalty upon the directors in case of the creation of indebtedness before receiving the prescribed capital. Thus it furnishes to creditors and to the public generally a measure of protection greater than that furnished by the generally prevailing incorporation laws. At the same time it is in furtherance of sound business methods by enabling corporations to raise money by selling shares at their actual value instead of by borrowing or otherwise increasing their indebtedness.

In a recent work, Dr. Dewing of Harvard, says:

Capital stock . . . involves two distinct ideas—a participation in the rights of ownership, and a valuation of this participation. This latter is the par value. It is the less important. The stockholder can never collect, like the bondholder, the par value of his security from the corporation. Even though paid for in full and representing for a short time the full and actual value, the equality passes with the first business transaction, for the value of the corporation property changes with every success or failure of the corporation, . . . The essential character of the capital stock that remains permanent whatsoever the fortunes of the actual capital, is that it stands for a definite proportion of the corporate property and earnings. This involves no par value. The purpose of the stock would therefore be fully accomplished if the shares were merely proportionate parts of a total, in other words, shares without par value.

There could be, aside from doing away with the meaninglessness of par value, certain specific advantages. The most conspicuous is that of truthfulness. Without par value there is no pretense that the actual property of the corporation is equivalent to the par value of its shares after the liabilities are met, and there is no insinuation of overcapitalization or undercapitalization. In other words, the capital stock would stand merely for proportionate shares in the earnings of the corporation, and, if the corporation be liquidated, the proportionate shares in the equity remaining after all other claims had been satisfied.*

* Dewing, A. S., *Financial Policy of Corporations*, Vol. I, pp. 13, 14.

When corporations having shares without par value sought to do business in states other than the state of incorporation, they were generally licensed on the same terms as other corporations, their shares being treated as if they were for \$100 each. In Kansas, Missouri, Washington, and New Mexico, the state officials declined to admit them on any terms.

In Kansas and Missouri, the corporations rejected on this account brought suit before the supreme court of each state, which in both cases decided in favor of the corporations and issued a mandamus forcing the too conservative state authorities to admit them to do business on the same terms as other foreign corporations. These two cases are, up to this time, the only cases in which the issuance of stock without par value has figured in any way before our courts of record. The following extracts from the decision of the Kansas Supreme Court are given to show that the legality of the form is unquestionable, and that in the highest courts of states having no such law they have been adjudged absolutely legal:

The defendants say that because the shares of stock of the plaintiff have no fixed or nominal par value it will be difficult for the officials of this state to determine the amount of annual fees that the corporation should pay, and that there is no means of knowing what the capital stock of the plaintiff is, without an examination of its assets. These objections arise out of the fact that the plaintiff corporation is organized on a plan that does not call for a division of its capital into shares, each representing so many dollars of capital. Under the plaintiff's plan of organization, the capital may be much or little, and that capital is not divided into money shares, but into fractional parts.

The problem of determining the solvency and bona fide capitalization of the plaintiff presents no unusual difficulty. The fact that the shares of its stock have no nominal

par value is of little consequence. Any prudent charter board, in determining whether a foreign corporation is worthy of admission to do business in Kansas, would attach little importance to the nominal value of its shares of stock, even if they have a nominal value. As in all other cases, the charter board should concern itself earnestly to ascertain the genuine capital—those assets permanently devoted to the corporate business as a basis for its business credit, and upon which its hope of profits is rationally founded. . . .

The defendants contend that the plaintiff is not such an organization as is called a corporation in the constitution and laws of this state. The answer to this contention is that corporations without capital stock and without shares of stock are not new; they are as old as corporations themselves, and have existed in England and in this country for many years; our constitution recognizes them, and we have laws for their control and government.⁴

III

It is worth while to note the usual characteristics of the laws that authorize shares with no par value:

1. Authorization may be secured upon organization by charter provision, or by amendment of an existing charter. This latter method facilitates reorganization.

2. The privilege is generally limited to what are termed in New York "business corporations," that is, corporations organized for mining, manufacturing, and mercantile ventures.

There would seem to be no reason why such shares should not be issued by public utility corporations, but William I. Ripley in his work on Railroad Finance and Organization strongly opposed such issues, and as yet it has not been done and is not authorized in any of the more important states.

3. The statutes provide that in all

⁴Petroleum Co. v. State Charter Board, 105 Kansas 161.

cases such shares shall be equal in all respects. This would be the common law, and it has been reaffirmed in each state where a no par value stock law has been enacted. Each share is equal in rights and privileges to every other share.

4. These equal rights and privileges are that each share entitles the holder to one vote for each share held, to notice of corporate meetings, to inspection of the corporate books, to participate proportionately in dividends after preferred dividends are paid, and to share proportionately in the surplus after debts are paid and after the preferred stockholders have been paid their principal and all accumulated dividends.

5. The certificates of shares with no par value must give the number of shares to which the holder is entitled and should give the whole number of shares authorized to be issued. As the shares have no par value, it would seem that the holder should be informed as to whether his shares are each one-hundredth, one-thousandth, or one-millionth. In New York this information must be given but in no other state is it compulsory.

6. All the states prescribe some method of fixing a selling price, but there is a curious diversity of methods. It may be prescribed in the charter; this is objectionable, as one advantage of stock without par value is that the corporation may sell it for any price it will bring, and under this plan any change in price would require an amendment of the charter. Another plan is to have the price fixed by the directors, and sometimes this must be authorized or confirmed at a majority meeting of the stockholders. In some states the stockholders by a two-thirds vote may fix the price. These varying methods are examples of experimental dealing with a new and untried problem.

7. The organization tax varies. In most of the states the tax on organization is computed by assuming that each no par value share has a par value of \$100.

8. Another problem has been to fix a valuation of the stock in a corporation having shares with no par value, for the purpose of annual taxation. In New York the rule is to take the amount of preferred stock sold at its par value and add the actual sales price of all no par value shares that have been sold. In Pennsylvania the same rule holds.

Generally in assessing taxes the no par value shares are arbitrarily considered to be worth \$100 each. If a corporation issuing such shares desires to do business in another state, its no par value shares are treated as if they were \$100 shares.

9. Where provision is made for the issuance of preferred stock it is usually also provided that such stock shall be of specified par value and shall likewise be preferred in distribution of assets. In such case the preferred stock has preference in assets over any no par value stock. After the preferred stock has been paid in full and all accumulated dividends have been satisfied, if any assets remain they are either surplus profits or else capital contributions from no par value stock, and whichever is the case the holders of the no par value stock are entitled each to his proportionate share. If no preference as to assets is given preferred stock, the holders of no par value shares would be entitled to an interest in assets proportionate to the amount actually paid in on such shares. If there were surplus profits above the par value of the preferred stock and above the accumulated dividends to preferred stockholders the surplus profits would be divided among the holders of the no par value shares.

The use of no par value shares involves no accounting difficulties. The object is to simplify and make possible the issuance of stock to represent contingent or speculative interests in the business. This simplicity and directness are shown by the straightforward and comprehensible entries used to record its issuance. Frederick H. Hurdman says:

In recording stock of no par value on the books and setting up values in the statements of assets and liabilities, it does not seem that any difficulties are presented. The capital account should reflect the value at which the stock was issued—whether for cash, property or services. The only other account representing a measure of value in the outstanding stock, outside of certain reserve accounts, would be the surplus account. In my opinion this account should at all times represent undistributed net earnings of the corporation.

Inasmuch as the capital account will not generally reflect on its face the number of shares outstanding it will be necessary to show in the capital account itself the shares issued. It does not become necessary, as in the case of stock with par value, to carry any portion of the proceeds received from its sale to a paid-in-surplus account. Furthermore, the fact that stock may be issued at varying values for each share has no significance other than to raise or lower the unit or share value for every other share outstanding. Each share represents an aliquot part of the entire capital, other than that portion which may be allocated to one class of stock by virtue of preference.

The number of shares authorized should be noted on the capital stock account. A separate account is, of course, unnecessary to record this fact.⁵

IV

The advantages of stock having no par value may be summed up as follows:

1. It simplifies the corporation or-

ganization in that the actual investment may be represented by preferred stock and possibly a bond issue, while the contingent interest in the profits is represented by the no par value shares. If the business is successful so as to yield returns over and above the agreed compensation to the holders of preferred stock, those who have managed it so well receive an adequate reward in dividends on their no par value shares. If it does not succeed so well, the shares being of no published value failure to pay dividends is not to the public discredit of the corporation.

2. It avoids the clumsy and oft-times fraudulent issue of stock for property to make it full paid. Even where the directors are conscientious about contracts, patents, etc., offered in exchange for common stock, the transaction does not look well on the corporate records and really requires a false statement on the books. The methods by which treasury stock issued for property of uncertain value was made full paid on the books have always been an embarrassment to the conscientious accountant.

3. It prevents frauds on common people by treasury stock being sold below par. The general run of people have always been deceived by this procedure, feeling that stock marked \$100 must in some way be worth \$100 and that if they could get it at a discount they were being let in on the ground floor.

Another cardinal advantage would be that of forcing the prospective investor to examine the real value of stock, and not be deluded into thinking that there is some necessary connection between the par value and the real intrinsic value.⁶

4. Issues having no par value are true to the facts and true on the corporate records. With such stock what

⁵ Hurdman, F. H., *Capital Stock of No Par Value*, *Journal of Accountancy*, October, 1919.

⁶ Dewing, A. S., *Financial Policy of Corporations*, Vol. I, p. 14.

is received is entered on the books just as it is paid, and in neither the accounts nor the statements made is there either deception or stultification. No question of overcapitalization or undercapitalization can arise.

5. Neither creditors nor purchasers of stock can be deceived by no par value stock. The stock certificates do not claim to represent anything except an interest in the company and its possible profits. On the books of the company there is fictitious capital and creditors know that what they have to look to is only the par value received for preferred stock, plus any amount of cash or property actually paid on the no par value stock; that it, the real capital stock of the company, is shown by true entries of the actual sales receipts.

6. Stock without par value may be sold at any desired price. After the purchaser has paid the agreed price he cannot be involved in any liability. The sale at a low price does not discredit the corporation nor does it deceive the buyer.

7. It facilitates mergers and reorganizations. When the great combinations were formed they were usually planned so that actual assets were shown by the preferred stock or bonds of the combination and the common stock represented only the expectation of profits. Now this same result can be secured much more accurately by the issue of preferred stock in conjunction with the issue of stock having no par value, and the excessive capitaliza-

tion and deceptive issues of common stock that characterized the old system is avoided.

In a book on Ireland was a chapter on the snakes of Ireland. It contained this information and nothing more: "There are no snakes in Ireland." It would not be far out of the way to say: "There are no disadvantages in no par value stock."

A work now in press on corporate financing says in regard to this subject:

Practice so far seems to have developed no material objection to the use of the no par value share by the ordinary corporation. In some cases the shares may be more difficult to sell from the very fact that they carry no dollar indication of their value, or they may be unacceptable because of their novelty, or they may be found objectionable from the standpoint of taxation. All these things are to be considered.

That the law should work smoothly in practice is owing to the fact that it was originally drafted by a committee composed of some of the best lawyers in the United States, to meet a specific need and to avoid certain specific corporate ills. Its use has been entirely optional. It has been accepted by the business world on its merits. It has been extensively used and no serious objections have developed. It is not unjustifiable to assume that the plan is successful and that stock with no par value will hereafter be a permanent and esteemed feature of our corporate law and practice.

THE TYPICAL BUSINESS MAN

BY JOSEPH FRENCH JOHNSON*

THERE is no such thing as the typical business man.

Slowly, but surely, this obvious fact is being understood. Business procedure that is based upon the assumption of a type-psychology is being challenged everywhere for its credentials.

Business in the past has shown a tendency to organize and conduct its affairs toward the focusing point of a typical public. This typical public takes the vague form, to the retailer, of a typical consumer; the jobber assumes a typical retailer; the manufacturer maintains a hazy conception of a typical jobber.

Everywhere is the assumption of the typical business man. Type runs into stereotype.

It is not surprising to find the individual reduced to a negligible consideration. The magazine publisher talks about his typical subscriber. The automobile manufacturer puts his typical market directly into his specifications. The tooth-paste chemist advertises to the typical man and woman who want good teeth as a social asset. The business world is ridden with the specious claptrap of type.

The other day I stopped at the little tobacco shop where I buy my cigars and found it closed. The old fellow who once owned this shop had done business there for thirty years. Two years back he had died and left the business to his son. Today truckmen were removing the wooden Indian.

I was not surprised. Old customers gave many reasons for the failure. So did the boy. Some said that the chain

stores had undersold him. The old man had successfully competed for twelve years against the largest corporations on the avenue. Others said that the son was not a shrewd buyer. Few knew that the boy had done most of the buying for the last five years.

There were many plausible excuses for the failure, but I found no one who really seemed to see the obvious cause. That little tobacco business had been run for thirty years on the assumption that there was no such thing as a typical smoker.

When the chain stores came along I heard the old man give them their due praise. He was really pleased to see the tobacco business wear the clothes of an aristocrat. But he had no misgivings for his own little shop. He knew a secret that many present-day business men are forgetting—there is no such thing as a typical business man.

The old man had been an inveterate smoker. He knew that there were one thousand individual tastes to one thousand individual smokers. He built his little fortune on a small five-cent cigar which he made in every conceivable shape and color for his varied trade.

He, himself, usually presided at the counter. That was how he knew, and remembered always, that I liked a red mahogany tint to my cigar wrapper. That was how he learned that the little Swiss watchmaker down the street would never touch tobacco that had been grown from Havana seed. "Made his throat fuzzy," he said.

The father, in the course of those

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thirty years, built up a business that was netting him over ten thousand dollars a year when he died. The boy had run through it in a little less than two years.

Why? Three weeks after his father died, the son hired what might have been called a typical clerk. The clerk forgot about the fuzzy throat of the little Swiss watchmaker. Presently a partition, what might have been called a typical partition, was erected between the street windows and the back of the shop so that you could no longer watch the interesting work of the cigar-makers. The boy himself retired to a typical cage with a stenographer, again, typical.

Eventually, customers began to receive the typical product of this typical little shop. It was a typical five-cent cigar. It did not take people long to find that the chain store around the corner did it much better. Hence the removal of the red Indian.

It is easy to find such obvious examples of the blight of what I like to call the assumption of type. But it is difficult, always, to make the obvious thing apparent.

I have known men who in their problems of control in business faced the most commonplace errors of type conception without recognizing, or even suspecting, the fact. Wherever business has a tendency to become intricate and involved, there is a like inclination to be blind to the ostensible. And it is always the ostensible that furnishes the foundation stones for any business.

One of the reasons that the efficiency expert in modern business has not gone so far as he should have gone is found in his passion for the typical. So much of his philosophy is based upon the assumption of type, the typical factory hand, the typical foreman, the typical energy, the typical fatigue, etc.

I am looking forward to the time when this same expert will see the obvious because it is so apparent. Then, I think, efficiency systems will move along on a much sounder basis.

Recently I had business that called me to the office of a successful lead-pencil manufacturer. I found a perturbed young salesman "on the carpet" deep in the intricacies of a postmortem.

From what I could gather, the young chap had "fallen down" on a decidedly tough prospect. The salesman was a bright, alert sort of lad with a clear eye and a determined chin. He had no cheap excuses. He was frank in stating that there was something lacking in his ability "to put it over."

The pencils were to be used in an advertising campaign by a certain political boss in, we'll say, Chicago. It was not Chicago, but that name will do.

The boy was thoroughly discouraged. He had been pursuing the business for thirty days without results. A heavy expense account was facing him.

"I guess I'm a failure in this selling business," he ventured.

The manufacturer kept a steady face.

The boy pulled a dejected chin. And then he said: "I never was much on this political stuff, anyway. I never could get behind the psychology of your average politician."

Immediately, I saw the manufacturer come up in his chair. "My boy," he said, "you go back and sell those ten thousand pencils to 'John W. Thom of 20 Mercer Street, Chicago.' Forget that psychology-of-the-average-politician stuff. You aren't selling to an average politician. John W. Thom is a he-man. There isn't anything average about him. There's where a lot of you young fellows go wrong. Psychology is all right. If I'd known more about it when I was your age I'd be further along today, but you've got the wrong end of the handle.

What you want in this deal is the psychology, the own, peculiar kind of psychology, that turns the wheels in the personality of John W. Thom. Forget that 'average' stuff."

After the war an exporter came to me and incidentally remarked that he was making ready to enter the South American trade.

"I'm going after the wops," he said. "I want a number of young chaps who are parlor broke. These Spanish and

Portuguese are all alike. I used to travel down that way a bit twenty years ago. To trade with them you've got to go it fifty-fifty between a jazz tea party and a meeting of the League of Nations. After that maybe you can sell them a tin of beans."

"I see," I said.

"See what?" demanded he.

"I see," I continued, "that the typical American business man is to have 'South' prefixed to his name."

BANK POLICIES AND BAD PERIODS

BY B. M. ANDERSON, JR., PH.D.*

THE rise in interest rates, reflected in the declining prices of good bonds, is significant of the scarcity of capital. It is, moreover, one of the automatic ways by which that scarcity is to be remedied. It checks the demands of the borrowers and it encourages investors to save. If no interest were paid at all there would be slight inducement to the public to stop consumption. The higher the interest rates, the more inducement there is to business and the public to economize, save and increase the supply of capital. Artificially low money rates in the short-time money market, making it possible for a business man to substitute bank credit for real investors' money, grew out of a mistaken policy, and a policy which the world has come in recent months to realize must be abandoned. We should welcome the rise of both short-time money rates and long-time interest rates, as a means of insuring both the

creation of a new capital and the better utilization of existing capital.

The banker cannot solve the problem alone. There is need for retrenchment and economy everywhere. Governments, individuals, and businesses must spend less, must spend more judiciously, and must eliminate luxury and waste. The banker is, however, in a better position to guide and control the utilization of capital and to prevent its waste than is any other type of business man. He comes into contact with every kind of business. He knows, as no other business man can know, the relative needs of different parts of the industrial system for funds. Not because he is personally more sagacious, but because his opportunities are better, he is more capable of seeing the situation as a whole than any other business man. He has, moreover, a greater responsibility than any other business man for keeping the situation balanced and for protecting loan funds from improper use. His moral responsibility is greater.

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He is a guardian of his depositors' funds, and he is a guardian of the business stability of the country. In the interests of the business situation, he has been obliged to disappoint many individual business men. In order that some businesses may not be deprived of vitally necessary funds, he has been obliged to decline to lend to other good businesses funds for expansion and even to insist that some good businesses should contract their borrowings. By following this policy in recent months, American banks have saved a delicate situation. Our banking system is impregnably strong. We have met an emergency courageously. The banking system of the United States has the credit situation fully in hand.

I think there is general agreement among bankers in the United States

as to what the essentials of sound banking policy in a period of strain like the present are. A sound policy in such a situation involves two elements, both of which are equally important. The first is conservatism and caution in making loans which customers do not actually need. The second, which the first makes possible, is courageous lending to the full limit of the need to solvent customers who must have money. We are no longer hampered by inability to use our reserves in times of emergency, as was the case under the old National Banking Law. Reserves are accumulated precisely that they may be used in times of emergency. We have the reserves, and no solvent business man need fear that they will not be used to the full extent that is necessary for his protection.

PROBLEMS FOR THE BUSINESS EXECUTIVE

ACCOUNTING PROBLEMS

BY HAROLD DUDLEY GREELEY*

IN opening this department of *Administration* it is believed advisable to state in a general way its objects and to outline the general methods by which these objects will be sought. In this section of *Administration* matters pertaining to the business executive's contact with his accounting department will be discussed. Among the matters considered by this department will be the fundamental one of what a business executive has a right to expect from his accounting department and how he should proceed to get it. We will not for the present be concerned with technical details of accounting, except as they affect the fundamental problem.

Most of the discussions in this department will be based on examples or instances that arise in the daily conduct of business. It may accordingly be called a "problem department," but not one which deals alone with accounting or certified public accountancy examination problems. There is no intention, on the other hand, of treating the subject in the manner of a textbook. Treatises on effective management, controllership, or treasurership will not be printed; but, of course, the underlying principles will be referred to and commented upon so that the example used may be of general suggestive value. There will be no attempt, however, to develop general principles in logical sequence after the manner of a textbook.

Questions of terminology will be discussed from time to time, because looseness of expression and inaccurate use of words are potent factors in business misunderstandings. Many professional societies and business associations are working toward standardizing terminology as a part of a general movement toward the standardization of all industrial

life. It should be noted, however, that there is danger lest standardization, like the lamented "efficiency," become a fetish. The idea underlying movements of these kinds is fundamentally sound but to over-stress the word representing the idea may lead to an undeserved distrust. In short, this section of *Administration* may be looked upon as a laboratory where practical applications of principles may be worked out and their results tested. Beyond that it will serve as a medium for presenting and discussing the reader's problems. Contributions with that in view will always receive courteous consideration.

It might be well at the outset to define the idea of "executive" and to outline the general functions of his office. An executive in any line of business has three functions to perform; he must organize, deputize, and supervise.

The work of organizing consists in planning for all usual transactions, and in providing the necessary procedure to meet unusual transactions. For example, the routing of orders through the office, or of work through the factory, or of correspondence among departments, are matters of usual occurrence, for the handling of which an organization of material and employees must be provided. In organizing, the executive should anticipate and make tentative provision for unusual transactions and for understudies to handle the work in the absence of regular employees and sub-executives. Just as the executive officer of a ship must in his organization provide for the handling of the ship's work under all conditions, usual and unusual, so the executive in business must outline the procedure to be followed under all circumstances.

The work of the executive in deputizing involves selecting individuals to carry on details of the work and to control the labors of groups of individuals. As a chain

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is no stronger than its weakest link, to quote a time-worn adage, so an organization, in time of stress, is no stronger than its weakest responsible person. The work of deputizing involves a keen judgment of human nature and a considerable knowledge of vocational selection. Few executives are equally successful in all phases of their three-sided function. In this department little will probably be said about employee-selection because the deputizing function of the executive is too big a field to be combined with any other. The work considered here will cover the first function of the executive, namely, that of organizer, and that of supervisor. Both of these will be discussed as they are involved in the executive's relation with his accounting department.

Supervision really means the critical examination of the work of all persons who have been deputized to carry on the organization. While organization work demands a constructive and imaginative faculty, complete supervision requires a critical faculty. It is difficult to find in an executive these naturally opposed faculties equally developed.

Though executive work is not detail in nature, supervision necessarily implies an examination of work done by others. A business executive must endeavor at all times, and without allowing himself to become involved in the mass of detail found at every stage of business, to apply tests to the work of sub-executives and employees. True executive supervision involves, first, organization of personnel and office facilities, in order as far as practicable to prevent errors; and secondly, a system of supervision designed to detect errors which have not been prevented. The errors to be guarded against and detected are not merely minor in character, but include mistakes of a fundamental nature which sometimes affect adversely the very operation and growth of the business. The controller who does not control is a pilot asleep. It is hoped in this department, by discussing business experiences and the interchanging ideas, to point out instances of inadequate executive control and to suggest possible remedies for them.

There is one other person besides the

executive involved in all this work, and he is the mythical person known to the law as the average reasonable man. It is by the supposed effect on him that many of our acts are judged. Whether or not we are deceitful or fraudulent depends frequently upon how our words and actions would influence this average reasonable man. Likewise, whether or not we are good executives depends largely upon how we provide for the understanding and capabilities of the average reasonable employee. In our relations with persons outside of business, we must always be on the outlook for this average reasonable man, because he is the one who will rely upon us not to mislead him in our statements of facts and figures. The average reasonable man in a responsible business position knows and cares very little about book-keeping machinery. He spends little or no time in trying to understand technical statements and terminology; so in dealing with him the executive must take great care to use words, forms, titles, and captions which will mean to him exactly what they mean to the executive. Carelessness may be called the great American curse, and carelessness in dealing with persons outside of business is frequently the cause of serious loss, involving sometimes the most valuable asset a business can possess—its good-will.

Carelessness in preparing statistics involves, not only a lack of care in preparing figures, which usually can be detected by proper supervision, but also a lack of forethought in selecting the fundamental bases upon which figures are compiled. Probably most of us remember the ancient statistical anecdote which proved that it was very unhealthy to be a total abstainer in the tropics, in view of the fact that in one year there had been 50% of deaths among the total abstainers in the Indian army, until investigation showed that in that particular year there were only two abstainers in the army and one of them had been eaten by a tiger. A more modern yarn involved a manufacturer of rabbit meat sausage who used a certain amount of horse meat in his mixture. When the quality of his product deteriorated and he was asked what percentage of horse meat

he used, his explanation that the proportions of horse meat and rabbit meat were equal sounded plausible, until cross-examination revealed the fact that by equal he meant one horse to one rabbit. Similarly, the executive in preparing statistics for his own guidance or for the information of persons outside of the business organization should be particularly careful to specify exactly what he means and the methods he followed in arriving at his statistical conclusions.

A common example of vagueness in understanding is found in the calculation of turnover. To illustrate, in a retail shoe store where the average gross profit was 25% of the selling price, the sales during the six months ended June 30, 1920, were as follows:

January.....	\$6,447.98
February.....	9,692.73
March.....	14,200.03
April.....	11,772.95
May.....	11,013.64
June.....	10,670.15

The inventories involved in the calculation are given below:

January 1.....	\$62,520.72
February 1.....	64,672.96
March 1.....	67,349.64
April 1.....	67,900.37
May 1.....	67,002.09
June 1.....	66,880.87
July 1.....	64,230.45

Before the turnover of this business can be calculated for the guidance of anyone interested in its result, a definite conception of what turnover actually is and what methods are to be employed in ascertaining it, must be secured.

The turnover of merchandise stock may be defined as the use of it in trade or exchange. That is to say, it is the selling of the merchandise and the converting of it thereby into accounts, notes receivable, and cash. Turnover is sometimes called "stock turn." The object of a merchant in making this turnover or stock turn is to sell his merchandise at a price higher than its cost and so realize a profit. Such a profit is known as gross profit because the expense of making the turnover must be considered before the merchant's final or net profit can be determined.

Many of the expenses of making the turnover of stock are fairly fixed in amount and depend, not upon making the turnover, but upon the element of time. For example, rent of a store where sales are to be made depends solely upon the element of time, as the rent expense continues from day to day regardless of whether or not any sales at all are made. Another expense which depends solely upon time is the salary of each employee who is paid by the day, week, month, year, or any other agreed period. Other expenses which depend primarily upon the element of time and slightly, if at all, upon the volume of sales, are: depreciation of office furniture and fixtures, heat, light, and power, taxes, insurance, and interest on borrowed capital.

The significant fact to the thoughtful merchant is that so many of his expenses, and, indeed, his own demands upon the business to meet his personal living expenses, depend principally, if not entirely, upon the element of time. It must be that he is under the necessity of making the turnover of merchandise as quickly as possible, so that the general expenses to be deducted from his gross profit will be relatively low. Gross profit, or the excess of selling price over cost of merchandise sold, does not depend at all upon the element of time. Consequently, if the same amount of goods which was sold in six months could have been sold in five, the gross profit would have been the same. But in the latter event the net profit would have been greater if the expenses depending upon the element of time had been reduced by one-sixth.

Another result of quick turnover of stock is that money secured in that way becomes available for the prompt purchase of new stock to be turned over or sold. To borrow or invest more money for such purchases is then unnecessary. In Harvard University there is a Bureau of Business Research, the object of which is to gather, classify, and describe facts about business. In its Bulletin No. 1, issued October 30, 1913, there is the following comment on the matter of turnover:

It is probably scarcely necessary to call attention to the public importance of this item of stock turn. Imagine in the roughest kind of way the millions of capital that could be released

from investment in merchandise, should the retailer increase his stock turns but once. The bearing of this, furthermore, upon the demand for higher profit per pair (of shoes), now rather prevalent, may also be seen. More stock turns mean an increase in net profit without any raising of the price per pair.

The significance and practical value of turnover figures should be appreciated by every executive in merchandising activity. Financial statements showing only the sales, cost of sales, customary expenses, and resultant profits do not furnish a sufficiently complete guide for administrative control. The operating results shown by the books of account should not merely be presented in the form of financial statements, but should be interpreted for use in the scientific management of the business by showing, for one thing, the turnover of the merchandise. When such figures are available, any tendency of the ratio between current assets and current liabilities to decrease, can, with reasonable certainty, be foreseen sufficiently in advance to be checked.

Turning now to the calculation of the turnover in the case illustrated, the first question to be met is the manner or method by which the calculation should be made. Since turnover is the use of merchandise in trade through selling it, that we must compare the inventory (merchandise available for sale) with the sales (merchandise which has been sold) becomes clear. It also is clear that in this comparison we must use, not the amount realized on sales, but the cost of goods sold, because inventories are (or should be) stated at cost and comparison should be made only between like elements. To compare sales at selling price with inventory at cost, or vice versa, would produce a meaningless result.

There is some difference of opinion among accountants in determining the inventory figure to be used in this calculation. Some argue that the opening inventory should be used, others hold that a much more significant figure is the average inventory during the period. Inventory at the beginning of a fiscal period is usually based upon physical stock-taking, and as a rule, physical inventory is taken when the stock is low in order to reduce the cost and inconvenience. In fact, many retailers

reduce their stock before inventory times by special pre-inventory sales at reduced prices; nearly all of them accomplish something in this direction by reducing or discontinuing purchases of new stock immediately prior to stock-taking. Consequently, the inventory at the beginning of a fiscal period is likely to be lower than the average inventory during a period. For that reason the beginning inventory should not be compared with the cost of goods sold during the period to determine the relation between merchandise on hand and merchandise sold. The turnover is more accurately determined by comparing the average inventory on hand during a period with the cost of goods sold.

The rate of turnover should be stated as a percentage of the average inventory on hand during the period. This percentage is determined by dividing the cost of goods sold by the average inventory. For example, if the cost of goods sold is \$3,000 and the average inventory is \$2,000, the rate of turnover is 150%—stated for convenience as 1.5. In other words, the stock has been turned over one and a half times.

In this problem, to determine the average inventory during the six months presents some difficulty. We may assume that only the inventories at January 1 and July 1 are actual, that is, determined by physical stock-taking, and that the intervening inventories are estimates. Nevertheless, the intervening inventories, being the best practicable estimates, must be considered as reliable as the others.

Seven inventories are given. To determine the average for the six months, shall we add the first six and divide by six, shall we add the last six and divide by six, shall we add the seven and divide by seven, shall we add the first and last and divide by two, or shall we use some other method? We may eliminate at once the method of adding the first or last six and dividing by six, because that would ignore either the opening or closing inventory for the period, a result obviously to be avoided. We may eliminate also the method of adding the first and last ones and dividing by two, because that would ignore all intervening inventories, which for reasons explained above more nearly reflect the average

inventory than do the opening and closing actual inventories.

At first glance the method of adding the seven and dividing by seven seems sound, but reflection shows that the opening inventory at January 1 was the result in part of purchases and sales during the preceding December, a time outside of the six months under consideration. Reflection shows also that the closing inventory at July 1 was in part in anticipation of demands to be made on it by July sales, which also would be outside of the six months under consideration. Every intervening inventory, on the other hand, was affected only by the sales within the six months period. In view of these facts, it would seem incorrect on principle to give the same relative weight to the January 1 and July 1 inventories as to the intervening inventories. Yet, adding the seven and dividing by seven does give all the inventories the same relative values.

The way out of the difficulty which seems most likely to give a fair average during the six months is to determine the average for each month and then average these six averages by adding them and dividing by six. The average for each month is determined by adding the opening and closing inventories of the month and dividing by two. For example, the average for January is the sum of the January 1 inventory \$62,520.72, and the February 1 inventory \$64,672.96, divided by two, or \$63,596.84. Applying this method, the average for the six months is \$66,196.92. Using the other methods mentioned in the calculation, the average inventory figures will range from \$63,375.58 to \$66,339.39.

The remaining step in the calculation of the turnover is to determine the cost of goods sold, which in this case is merely 75% of the total sales. It would, of course, be a waste of time to determine the cost of goods sold each month and then add the six amounts to get the total. The cost of goods sold is found to be \$47,848.11. Dividing this by the average inventory of \$66,196.92 gives .7229 as the rate of turnover.

Failure to specify exactly what is meant in financial agreements is sometimes caused by an ill-concealed contempt on the

part of lawyers and business men for "mere bookkeeping." Such men frequently will call upon the accounting department for facts concerning the results of operation or for the financial condition of the business, and generally accept the statements so furnished as absolute fact. Apart from the question of how much in such statements necessarily is mere opinion and not fact at all, a matter which we will discuss in a later issue, lies the danger of accepting bookkeeping statements as facts, unless all the basic conditions and assumptions are clearly understood by all parties to negotiations. Misunderstanding and frequently litigation may result directly from a lack of accuracy in expression, both in instructions to bookkeepers and accountants and in the preparation of statements by them.

The following is an example of the failure to specify clearly what was meant by the parties to an agreement. A factory manager was engaged under a contract which stated that he was to receive "\$3,000 per year and 5% of the profits." A copy of this was given to the accounting department. In accordance with the chief accountant's interpretation of it, the accounts were kept and financial statements were prepared. These statements were not satisfactory either to the proprietors or to the factory manager.

The accounting department had treated the manager's salary of \$3,000 as a manufacturing expense, which thus formed part of the cost of goods sold, and allowed the factory manager 5% of the gross profits. In other words, the \$3,000 was considered an expense of earning the gross profit, and thus was deducted, with other items of manufacturing cost, from the sales in order to determine the gross profit of which the manager received 5%.

The manager protested that the \$3,000 was not a manufacturing expense but a general one and therefore it should not be deducted, with other items of manufacturing cost, from the sales, in order to determine the gross profit on which his 5% was to be based. The proprietor stated that he did not much care whether the \$3,000 was considered as a manufacturing expense or a general one, inasmuch as it was perfectly clear to him that the 5%

was to be calculated on the net profit and not on the gross profit.

There may reasonably be differences of opinion both as to how an average reasonable man would construe this clause of the contract, and as to what would be the fairest interpretation of it. Leaving to lawyers the determination of the average reasonable man's opinion of the clause, let us confine ourselves to the discussion of the fairest interpretation which, after all, is the criterion by which most business men endeavor to settle their disputes.

One element in the problem has an analogy in determining proper wage systems for factory working men. One of the wage systems sometimes adopted to increase production and establish cordial relations between management and labor, gives the working man a share of the net profits of the business in addition to his wages. This system frequently proves unsatisfactory and generally is not indorsed by writers on wage systems, the reason for this being that profits depend to a great extent upon factors which cannot be controlled by the working man, such, for example, as the efficiency of the selling force and business shrewdness in taking contracts. If factors such as these result in profits, the working man has no particularly just claim upon the profits derived; on the other hand, if these policies cause a loss, the working man would be the first to remonstrate against bearing any part of it for which he was in no way responsible.

Similarly, in the case under discussion the factory manager could not control any of the elements of profit or loss except the cost of goods sold. It seems fair, therefore, to calculate his 5% on the gross profit, but in determining the gross profit, his salary of \$3,000 should be considered part of the cost of goods manufactured, it being recognized, of course, that the cost of goods manufactured would rarely, if ever, be the same as the cost of goods sold. The cost of the goods manufactured would be adjusted at the beginning and at the end of the period by taking into consideration inventories of finished product. In our opinion, therefore, the interpretation placed upon the contract by the accounting department was fair. There can, however, be no

difference of opinion as to the impropriety and danger of stating the compensation contract in a way which should lead to such divergent opinions among the interested parties.

The following case is a variation of the preceding question, though it involves a somewhat similar situation. A corporation installed a profit-sharing plan with its employees. Under this plan profits up to 8% of the corporation's invested capital were to be held in the business and the remaining profits were to be divided among the stockholders and employees. At the end of the year it was necessary to determine the amount of invested capital, in order that the profits available for distribution to employees might be ascertained.

The corporation's balance sheet after showing the usual liabilities stated the common stock to be \$300,000, the preferred stock to be \$100,000, the "surplus fund" to be \$150,000, and the "depreciation reserve fund" to be \$75,000. A disagreement with employees arose concerning the question of whether or not the preferred stock and the "depreciation reserve fund" constituted or represented invested capital.

Before proceeding to discuss the main question, it is well to point out an error in terminology. The use of the word "fund" in this connection is not in accordance with generally accepted accounting terminology. The word "fund" should be used only to indicate a portion of the assets segregated for some specific purpose. Funds may consist of cash or securities put aside for future use, in liquidating debts, or for the extension of plant, or for any other purpose. Funds are assets and a fund account balance would appear on the asset side of the balance sheet. "Surplus fund" should have been stated as "surplus." The use of the word "fund" in connection with the depreciation reserve likewise was wrong. The proper caption for that account is "reserve for depreciation." In a subsequent issue this matter of accounting terminology will be considered in detail.

As to the merits of the question, however, there is no doubt that preferred stock, common stock, and surplus represent

invested capital. Capital is the excess of assets over liabilities regardless of the form of business organization. In a sole proprietorship it is represented by the proprietor's capital account; in a partnership it is represented by the sum of the proprietors' capital accounts; in a corporation it is represented by the capital stock accounts, and surplus. There is no reason for excluding preferred stock from this classification. That stock represents money originally invested in the corporation, and the only difference between it and common stock is a preference as to dividends or assets upon dissolution, or both.

The reserve for depreciation, improperly termed a fund, does not represent invested capital. It represents a shrinkage in asset value embodying the owner's best judgment. On the balance sheet this reserve should be deducted from the balance of the account representing the asset which is depreciated. Depreciation may be credited directly to the asset account, or for book-keeping convenience it may be credited to a reserve for depreciation. In any event the amount written off represents a shrinkage in asset value occasioned by the operation of the business. If reserves for depreciation were taken to represent invested capital, it would mean that there had been no shrinkage in asset value. It would, in fact, exactly offset and nullify the charges to profit and loss for the expense of depreciation.

Consequently, in the case stated the reserve for depreciation does not represent invested capital. The other three accounts, however, do represent it and there should be deducted from the profits an amount equivalent to 8% on total of the first three balance sheet items listed above.

If in this case there is any doubt about the accuracy of the depreciation written off, the reserve for depreciation account should be analyzed. If, for instance, it had been built up by arbitrary credits of a portion of each year's profits instead of by estimated shrinkages in asset values, it would almost certainly follow that the account does not correctly represent the shrinkage in asset values. If credits to the account exceed the depreciation, a secret reserve has been created and a portion of the reserve for depreciation properly belongs in surplus, should be transferred to it, and should thus become a part of the invested capital. If, on the other hand, inadequate provision for depreciation has been made, the surplus is overstated and the invested capital should be reduced by a debit to surplus and a credit to reserve for depreciation.

This last case is an authentic case of carelessness in accounting methods which led to a misunderstanding and dispute between the employees and the management. All difficulty could have been avoided if the depreciation, accurately calculated in the light of the best engineering judgment obtainable, had been credited to the reserve for depreciation and the balance of the reserve account had been deducted on the balance sheet from the asset accounts to which it related.

In this particular case another point was raised concerning the proper title for the asset commonly known as "real estate." It is not advisable to carry an asset listed as real estate because that usually includes both land and buildings. Separate accounts should be maintained for these two elements, because, though the buildings depreciate, the land does not.

A PROBLEM IN FEDERAL TAXES

By ERIC L. KOHLER*

TO illustrate the computation of the corporation income and excess profits tax for the year 1920, a typical problem, involving some of the complexities of the law, and its solution are given below.

THE PROBLEM

BAXTER MANUFACTURING COMPANY

COMPARATIVE BALANCE SHEETS, DECEMBER 31, 1919 AND 1920

<i>Assets</i>	<i>December 31</i>	
	<i>1919</i>	<i>1920</i>
Cash	\$25,800.00	\$27,070.00
Receivables	322,960.00	290,300.00
Inventories—Raw Materials	52,200.00	86,240.00
Inventories—Finished and Partly Finished Goods	120,840.00	156,250.00
Prepaid Expenses	1,000.00	1,400.00
Investment in Bonds—Newton Mfg. Co.	30,000.00	25,000.00
Investment in Common Stock—Newton Mfg. Co.	40,000.00	30,000.00
Investment in Sinking Fund	10,000.00	20,450.00
Land	6,500.00	6,500.00
Buildings	188,000.00	212,390.00
Machinery and Equipment	218,000.00	230,500.00
Good-will	100,000.00	100,000.00
Discount on Bonds	19,000.00	18,000.00
Discount on Stock	.....	1,000.00
Organization Expenses	3,000.00	2,500.00
	<u>\$1,137,300.00</u>	<u>\$1,207,600.00</u>
<i>Liabilities and Capital</i>		
Bank Loans	\$75,000.00	\$62,500.00
Accounts Payable	219,440.00	209,820.00
Accrued Interest	6,000.00	6,000.00
Accrued Wages	2,560.00	3,870.00
Accrued Property Taxes	1,500.00	1,800.00
Accrued Federal Taxes	40,000.00	.....
Reserve for Bad Debts	10,000.00	11,000.00
Reserve for Depreciation	78,200.00	110,650.00
First Mortgage 6% Bonds—Dated 1/1/19; due 1/1/30	200,000.00	200,000.00
Preferred Stock	200,000.00	200,000.00
Common Stock	150,000.00	250,000.00
Sinking Fund Reserve	10,000.00	20,450.00
Surplus	94,600.00	131,510.00
Capital Surplus arising from donated Stock	50,000.00
	<u>\$1,137,300.00</u>	<u>\$1,207,600.00</u>

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BAXTER MANUFACTURING COMPANY

ANALYSIS OF PROFIT AND LOSS ACCOUNT, YEAR ENDING DECEMBER 31, 1920

<i>Particulars</i>	<i>Debit</i>	<i>Credit</i>
Sales		\$1,705,900.00
Raw Material Purchases	\$1,360,000.00	
Direct Labor	125,400.00	
Heat, Light and Power	21,630.00	
Repairs	2,460.00	
Factory Taxes	3,100.00	
Depreciation—Buildings—3%	7,200.00	
Depreciation—Machinery—10%	25,250.00	
Miscellaneous Factory Expenses	28,400.00	
Inventories	173,040.00	242,490.00
Provision for Bad Debts	3,000.00	
Officers' Salaries	17,500.00	
Other Administrative Expenses	27,000.00	
Selling Expenses	48,900.00	
Dividends Received (5/1/20)		4,000.00
Interest on Notes Receivable		2,920.00
Profit on Sale of Newton Mfg. Co. Stock		5,000.00
Loss on Sale of Newton Mfg. Co. Bonds	500.00	
Loss through Payroll Robbery	5,900.00	
1919 Federal Taxes Paid in Excess of Reserve	4,200.00	
Interest Paid on Bonds	12,000.00	
Discount on Bonds Amortized	1,000.00	
Other Interest Paid	2,420.00	
Organization Expenses Amortized	500.00	
Balance—Net Profits Carried Down	90,910.00	
	<u>\$1,960,310.00</u>	<u>\$1,960,310.00</u>
Surplus Net Profits Brought Down		\$90,910.00
Cash Dividend, February 26, 1920—5% (Common)	\$7,500.00	
Cash Dividend, March 17, 1920—15% (Common)	22,500.00	
Cash Dividend, July 1, 1920—7% (Preferred)	14,000.00	
Appropriation for Sinking Fund Reserve	10,000.00	
Balance Carried to Surplus	36,910.00	
	<u>\$90,910.00</u>	<u>\$90,910.00</u>

Notes on Accounts:

1. Formation of Corporation.—The Corporation was formed on July 1, 1910, taking over the assets and good-will of the Freeman-Barber Corporation, manufacturers of automobile accessories. The vendors received \$93,500.00 preferred stock on account of the tangible assets, and \$100,000.00 common stock for the good-will. Land owned by F. M. Baxter, the principal stockholder was turned over to the corporation in exchange for 65 shares of preferred stock, although its value was \$15,000.00. The valuation of \$15,000.00 is substantiated by appraisals made at the time. Common stockholders donated back to the Corporation one-half their holdings for the purpose of raising working capital; this stock was sold in 1910 at 90 and the discount absorbed in the operating expenses of 1910 and 1911. On July 1, 1916, an additional 1,000 shares of preferred stock were sold at 108 and the premium credited to Surplus. A stock dividend in common stock was declared and paid on the same date amounting to \$50,000.00. On July 1, 1920, a similar stock dividend was declared out of Capital Surplus and paid, and on July 5, 500 shares of common were sold at 98.

2. Organization expenses originally amounted to \$5,000.00. From time to time amounts have been charged off against operating profits.

3. The stock and bonds of the Newton Mfg. Co. represent purchases in 1910 at par—400 shares of stock and 30 \$1,000 bonds. 100 shares of stock and 5 bonds were sold June 18, 1920 at \$150.00 and \$900.00 each, respectively. On March 1, 1913, the stock was selling for \$110.00 and the bonds at \$850.00.

4. Depreciation has been provided on the basis of 1913 valuations plus subsequent additions. The following analysis of the plant account shows how the 1920 provision for depreciation was arrived at:

<i>Particulars</i>	<i>Buildings—3%</i>		<i>Machinery—10%</i>	
	<i>Cost</i>	<i>Mar. 1, 1913 Value</i>	<i>Cost</i>	<i>Mar. 1, 1913 Value</i>
On Hand March 1, 1913	\$100,000.00	\$152,000.00	\$93,000.00	\$127,500.00
Subsequent additions at Cost—				
1913-1917	65,000.00	65,000.00	86,000.00	86,000.00
1918	17,000.00	17,000.00	24,000.00	24,000.00
1919	6,000.00	6,000.00	15,000.00	15,000.00
Total Cost or Value	\$188,000.00	\$240,000.00	\$218,000.00	\$252,500.00
Depreciation 1920		7,200.00		25,250.00

Depreciation was provided in 1918 and 1919 on the same basis. In the audit of the 1915-1917 returns the government's field auditor excluded excessive depreciation that had been provided during those years totaling \$6,620.00. The Company has paid the additional assessment but made no adjustment of its books. To avoid complicating the problem further it is assumed that no property was scrapped from 1918 to 1920.

5. Bad Debts charged off during the year amounted to \$2,600.00; Bad Debts recovered and credited to the reserve, \$600.00.

6. Interest of \$450.00 was allowed by the sinking fund trustee during the year on funds in his possession.

SOLUTION TO PROBLEM

(NOTE: "Schedule" and other terms used refer to Form 1120, the corporation income and excess profits tax return for 1919. An attempt has been made in a very general way to follow the required form in each schedule so that the variation from standard accounting procedure may be noted.)

<i>Schedule A—Taxable Net Income</i>			
Gross Sales		\$1,705,900.00	
Less—Cost of Goods sold (in part)—			
Inventory Jan. 1, 1920	\$173,040.00		
Purchases	1,360,000.00		
Direct Labor	125,400.00		
Heat, Light & Power	21,630.00		
Miscellaneous Factory Expenses	28,400.00		
	\$1,708,470.00		
Less Inventory Dec. 31, 1920	242,490.00	1,465,980.00	\$239,920.00
Interest on Notes Receivable			2,920.00
Interest on Sinking Fund Investments			450.00
Dividends received			4,000.00
Bad Debts recovered			600.00
Total Gross Income			\$247,890.00

Deduct—Business and Financial Expenses—		
Administrative Expenses (except Officers' salaries)	\$27,000.00	
Selling Expenses	48,900.00	
Compensation to Officers	17,500.00	
Repairs	2,460.00	
Bond Interest (including discount)	13,000.00	
Other Interest paid	2,420.00	
Property Taxes	3,100.00	
Bad Debts charged off	2,600.00	
Depreciation on Buildings and Machinery	32,450.00	\$149,430.00
Balance		\$98,460.00
Profit on Sale of Newton Mfg. Co. stock	\$4,000.00	
Profit on Sale of Newton Mfg. Co. bonds	250.00	4,250.00
		\$102,710.00
Less—Loss sustained through robbery	\$5,900.00	
Dividends received	4,000.00	9,900.00
Balance—Taxable Net Income		<u>\$92,810.00</u>

Schedule M—Reconciliation

Net Profit per Books	\$90,910.00	Dividends Received	\$4,000.00
Unallowable Deductions—		Bad Debts Charged Off	2,600.00
Federal Taxes 1919	4,200.00	Non-taxable Profit on Stock	
Provision for Bad Debts	3,000.00	and Bond Sales (Net)	250.00
Bad Debts Collected	600.00	Taxable Net Income per	
Interest on Sinking Fund		Schedule A	92,810.00
Investments	450.00		
Organization Expenses Amortized	500.00		
	<u>\$99,660.00</u>		<u>\$99,660.00</u>

Schedule E—Capital Stock and Surplus

Paid-up Capital Stock Outstanding December 31, 1919—			
Preferred Stock—2,000 shares at \$100.00 each	\$200,000.00		
Common Stock—1,500 shares at \$100.00 each	150,000.00	\$350,000.00	
Surplus—			
Paid-in Surplus—representing donation 1910 of 500 shares, sold at 90 and discount absorbed in Earned Surplus	\$50,000.00		
Earned Surplus	94,600.00		
Non-deductible reserves—			
Accrued Federal Taxes	\$40,000.00		
Sinking Fund Reserves	10,000.00		
Reserve for Bad Debts	10,000.00	60,000.00	204,600.00
Total Net Worth before Adjustment			<u>\$554,600.00</u>

Schedule F—Adjustments—Additions

Excess of value of real estate over par value of			
Stock exchanged therefor		\$8,500.00	
Organization Expenses Written Off		2,000.00	
Depreciation disallowed 1916 and 1917		6,620.00	
Realized Appreciation—Buildings 1918 and 1919	\$3,120.00		
Realized Appreciation—Machinery 1918 and 1919	6,900.00	10,020.00	\$27,140.00

Schedule G—Adjustments—Deductions

Excess of Good-will over one-fourth of the par value of Stock Outstanding (\$350,000.00)	
March 3, 1917	\$12,500.00

Schedule H—Changes During Year

Federal Taxes paid—		
\$44,200.00 × .42144809 ¹		\$18,628.01
Dividends paid out of earnings of prior years—		
Dividend of \$7,500 paid Feb. 26, 1920—		
310/366 of \$7,500	\$6,352.46	
Dividend of \$22,500 paid Mar. 17, 1920—		
Available Net Income first applied—		
Net Income for year	\$92,810.00	
Less—Income Taxes (approx.)	17,000.00 ²	
Available Income for year	\$75,810.00	
Available to Mar. 17—		
76/366 of \$75,810	\$15,741.97	
Balance from Surplus	6,758.03	
290/366 of \$6,758.03	5,354.72	
Dividend of \$14,000 paid July 1, 1920—		
entirely from available income	.....	11,707.18
Total charges reducing invested Capital		\$30,335.19
Sale of Common stock—		
500 shares sold July 5 for	\$49,000.00	
180/366 of \$49,000		24,098.36
Net charges reducing invested Capital		\$6,236.83

Schedule J—Inadmissible Assets

Income from Inadmissibles—		
Dividend received	\$4,000.00	
Profit from sale of 100 shares	4,000.00	\$8,000.00

Due to the inclusion of the \$4,000 profit in taxable income, $\frac{1}{2}$ of the inadmissibles held from Jan. 1 to June 18 become admissible. Hence the inadmissibles from Jan. 1 to June 18 were \$20,000 and from June 18 to Dec. 31, \$30,000. The average inadmissibles for the year are thus $20,000 \times 169$ plus $30,000 \times 197$ divided by 366 or \$25,382.51.

¹ Obtained by dividing the total number of days between the due date and December 31 for all instalments. The fraction for 1919 (365 days) was .42260274.

² Only an approximation may be taken at this point. Since the actual tax proves to be in excess of \$17,300, the error involved is about $1/14$ of 1.44% of \$300 or 30 cents.

Average admissibles:	<i>Jan. 1</i>	<i>Dec. 31</i>
Total all assets	\$1,137,300.00	\$1,207,600.00
Additions—Schedule F	27,140.00	32,650.00
	<u>\$1,164,440.00</u>	<u>\$1,240,250.00</u>
Deductions—		
Schedule G	\$12,500.00	\$12,500.00
Reserve for Depreciation	78,200.00	110,650.00
Discount on Stock	.....	1,000.00
Inadmissibles	20,000.00	30,000.00
	<u>\$110,700.00</u>	<u>\$154,150.00</u>
Total Deductions		
	<u>\$1,053,740.00</u>	<u>\$1,086,100.00</u>
Balance—Admissible Assets		
	<u>\$1,053,740.00</u>	<u>\$1,086,100.00</u>
Average for year ($\frac{1}{2}$ sum)		<u>\$1,069,920.00</u>

The percentage to be deducted from invested capital on account of inadmissible assets is obtained by dividing the average inadmissibles by the average of all assets (admissible and inadmissible). Hence—

$$\frac{\$25,382.51}{\$1,069,920.00 \text{ plus } \$25,382.51} = 2.32\%$$

Schedule B—Invested Capital

Capital Stock and Surplus (Schedule E)	\$554,600.00
Adjustments—Additions (Schedule F)	27,140.00
	<u>\$581,740.00</u>
Adjustments—Deductions (Schedule G)	12,500.00
	<u>\$569,240.00</u>
Changes during Year (Schedule H)	6,236.83
	<u>\$563,003.17</u>
Deduction on account of Inadmissible Assets (Schedule J) 2.32% of \$563,003.17	13,061.67
	<u>\$549,941.50</u>
Invested Capital for Tax Purposes	<u>\$549,941.50</u>

Schedules C and D—Computation of Tax

Having ascertained the taxable income and invested capital, a convenient formula³ may be applied to compute the tax (I=Income and C=Invested Capital):

$$28\% I - (1.44\% C \text{ plus } \$740)$$

Substituting, we have:

$$\$25,986.80 - (\$7,919.16 \text{ plus } \$740) = \$17,327.64$$

³ Six formulae may be derived from the application of the tax rates (I=Income and C=Invested Capital), covering both income and excess profits taxes for 1919 and 1920:

- (1) Where $I > \$2,000$ and $< 8\% C$ plus \$3,000; tax is $10\% (I - \$2,000)$
- (2) $I > 8\% C$ plus \$3,000 and $< 20\% C$; tax is $28\% I - (1.44\% C \text{ plus } \$740)$
- (3) $I > 20\% C$ and $< 28\% C$; and $C > \$25,000$ and $< \$71,428.57$ } $\$71,428.57$; tax is $46\% I - (5.04\% C + \$740)$
 $I > 20\% C$; and $C > \}$
- (4) $I > 8\% C$ plus \$3,000 and $< 16\% C$ plus \$3,000; and $C < \$25,000$; tax is $46\% I - (2.88\% C \text{ plus } \$1,280)$
- (5) $I > 16\% C$ plus \$3,000 and $< \$20,000$; and $C > \$25,000$; tax is $28\% I - \$740$
- (6) $I > \$20,000$; and $C < \$71,428.57$; tax is $46\% I - \$4,340$

These formulae are of practical use if put in the form of a graph.

VIEWS AND REVIEWS OF BOOKS

THE AUTOBIOGRAPHY OF ANDREW CARNEGIE

Preface by his wife, Louise Whitfield Carnegie.
xii, 385 pp. Houghton Mifflin Company

REVIEWED BY ALLAN NEVINS*

Mr. Carnegie's autobiography abounds in matters of interest to the business man, for his book is especially exhaustive on the subject of his career as entrepreneur and manufacturer.

Efficiency experts must recognize in Carnegie one of the pioneers of their calling. The Keystone Works made its own metals, and as Carnegie became acquainted with iron manufacture he was amazed to find that no one knew the cost of the various processes, taken separately. All iron masters waited till the end of the year to learn what their businesses brought them. Sometimes they thought they had been smelting at a loss and instead found a profit, and sometimes *vice versa*.

Carnegie, who by 1867 was in control of the large Union Mills, found this slipshod procedure intolerable. He insisted on introducing a system of cost accounting and weighing which would enable his superintendents to know the expense of each step in iron-making, the actual performance of each worker, and the points at which materials might be saved. This required clerks and weighing scales. It entailed complex paper-work, and thought and worry for once care-free employees.

The managers in the mills vehemently opposed it. But eventually Carnegie knew exactly what each department was doing and at what cost, and what each of his workmen was producing. One concrete instance is enough to show how he benefited from this check upon his work. The regenerative furnace of Sir William Siemens had come into use in England, but in this country it was regarded as too expensive. Yet Carnegie's accounting system showed

that in heating great masses of material sometimes half the waste could be saved by its use.

The specialist in any branch of applied science must also remember that Carnegie was one of the first great American manufacturers to appreciate the value of the specialist to industry. This autobiography hardly shows how great a knack he had for securing the services of inventive men. It was no accident that improvements like the Monell process, which he does not mention, originated in the Carnegie works. One of his best servants was Kloman, whom he carried over from the Pennsylvania Railroad, and who was the first to invent a saw for cutting cold iron into exact lengths, and to build the upsetting machines for making large-size bridge links. But Carnegie also made it a policy to find a place in his plants for the technically trained expert whom other companies could not "afford." Here appeared the tendency and insight that made him the founder of the Carnegie Institute.

When he built his first blast furnace, he took pains to employ in connection with it a learned German chemist, Dr. Fricke, the first instance of such employment in America. "Great secrets did the doctor open up to us," says Carnegie. Iron ore of a high reputation was found to contain one-fifth less iron than had been supposed; mines that had been thought poor were found to be producing really excellent ore; and nine-tenths of the dark places in iron-making disappeared under the blazing sun of chemistry. It was found that rivals were throwing away "cinders" exceedingly rich in iron, and the Carnegie furnaces bought them for a song.

It was found again that the Carnegie

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furnaces had once actually shut down because the ore used was so good, so high in iron content, that their methods of working it were all wrong. Mines like the celebrated Pilot Knob mine in Missouri, which other companies thought they could not patronize, were drawn upon with great advantage. Carnegie was able to produce the first hard-headed iron rails in America (this, of course, before the Bessemer steel-making process was known) because he was willing to spend \$20,000 for experiments at Pittsburgh. But he did not rush heedlessly into innovations. It is well known that several companies burned their fingers badly on the Bessemer process while it was still experimental; Carnegie waited until it had become well established before adopting it.

From bobbin-boy Carnegie became in his teens a telegrapher and train-dispatcher; he rapidly climbed to be superintendent of the western division of the Pennsylvania; and during the Civil War, while yet in his early twenties, he tapped three great sources of wealth by his purchase of oil lands, his introduction of the sleeping-car upon railways, and the establishment of his first iron and steel business.

To the narrative of this remarkable rise and of the upbuilding of his great manufacturing enterprises he gives more than 200 pages in a book of less than 400. He tells of his accumulations and business dealings with even more zest than he tells of his later activities as philanthropist and author, and of his friendships with the leading public men of America and Great Britain. The volume is enlivened by anecdotes that show his unflinching tact as well as his keen sense of humor, and cast a great deal of light on his relations with Schwab, Morgan, Pullman, Henry Phipps, and Levi P. Morton.

Stories of Carnegie's initial enterprise and pluck, some of them familiar, he retells with evident pleasure and pride. His first investment, when a \$40-a-month clerk in the Pennsylvania offices, was in an \$800 block of Adams Express Company stock which his family helped him buy by mortgaging their home; and when he received his first monthly dividend of \$10 he was overwhelmed.

"Eureka," he cried, "here's the goose that lays the golden eggs!"

His patron, T. A. Scott of the Pennsylvania, guided him to this first venture, but his second was made on his own initiative. While Scott's assistant at Altoona, twenty-four years old, he met a "farmer-looking man" who showed him the model of an invention. It was T. T. Woodruff, designer of the sleeping-car. The importance of the idea flashed upon Carnegie and he urged adoption of the car upon Scott. In return he was allowed to buy an eighth interest in the venture, and found that the receipts came in so fast that they quickly paid him for his share.

"The first considerable sum I made," asserts Carnegie, "was from this source." It was the primary reward won by his remarkable foresight.

Another early exhibition of acumen equally notable occurred in 1862. In the Pennsylvania shops at Altoona Carnegie saw the first small bridge ever built of iron. He perceived that the innovation was certain to sweep all before it, driving the inflammable wooden bridge, subject to rapid decay, from the field. He at once proposed to the designer, H. J. Linville, the formation of an iron bridge company. Five men formed this corporation, each contributing \$1,250—Carnegie borrowed his share—for capital. Some of the first bridges erected by the Keystone Bridge Company are yet standing.

When the question of spanning the Ohio River at Steubenville arose, many believed that it would be utterly impossible for Carnegie and his new company to throw a 300-foot structure across the channel. President Jewett, of the Panhandle, declared that "those heavy castings can't stand up and carry themselves, much less carry a train across the Ohio River."

In the same year that he founded the Keystone Bridge Company, young Carnegie visited the newly opened oil fields of Pennsylvania, and with William Coleman as partner bought an option on the Storey Farm for \$40,000. The wells on this farm in one year paid \$1,000,000 in cash, and the farm eventually was capitalized, on a stock basis, at \$5,000,000. But this venture in oil was an interlude in Carnegie's career, for his real concern was with metals.

Carnegie, indeed, taking a long look

ahead in the dark days of the Civil War, realized that the United States was bound to offer an unequalled field for the iron and steel manufacturer. In 1864, on this conviction, he organized the Superior Rail Mill to make steel rails, and two years later he established the Pittsburgh Locomotive Works. Just forty years later the original \$100 shares of this second company were selling for \$30,000 each. In connection with the story of these enterprises, he offers his "true secret of success"—his insistence that his shops never produce anything but the best possible commodities. His rails and locomotives were as good as he could fabricate. He boasts that no Keystone bridge has ever fallen, and that when asked to contract for a bridge of unscientific design or insufficient strength his company always declined.

Carnegie also suggests the importance of eternal vigilance as to business details. Salesmen should appreciate his story of how he won a contract for bridging the Mississippi at Dubuque against the competition of the country's chief bridge builders. The contract had been all but let to a Chicago firm, but Carnegie insisted upon going to Dubuque to argue with the railway board. The Keystone Company always made its upper bridge-cord of wrought iron, while its rivals made this essential section of cast-iron. Arguing the greater safety of the former, Carnegie was unexpectedly supported by a director who had lately driven his buggy into a cast-iron lamp-post and shivered it to pieces.

Moral: "If you want a contract, be on the spot when it is let."

A supplementary maxim which Carnegie emphasizes is that when a contract is promised the bidder should remain till he can carry it home in his pocket. In this instance, it was suggested that he leave the Iowa town and the contract would be mailed to him; but he preferred to wait and see a little more of the charms of Dubuque.

The relations of Carnegie with various great corporation heads have their lessons for business men. His abiding principle was to trust to the honesty of men of large affairs. When any dispute over an order or contract arose he settled it to the satisfaction of the other man, avoiding lawsuits.

Instead of quarreling with Pullman over the patent rights to the sleeping-car, and over contracts with the large western railways, he met Pullman in New York with a simple proposal.

"Unite," he said. "Make a joint proposition to the Union Pacific, your party and mine, and organize a company."

As he was willing to give the company Pullman's name, this was done.

About 1872 Carnegie suggested an idea to Junius Spencer Morgan, in London, for the sale of Allegheny Valley Railway bonds, it being agreed that he was to have a quarter of the profit. In the panic of 1873, J. P. Morgan approached Carnegie with a suggestion that he sell out his interest in the idea. Carnegie accepted, setting his price at the \$50,000 already due him plus \$10,000—\$60,000 in all. The next day Morgan handed him checks for \$70,000.

"Mr. Carnegie," he said, "you were mistaken. The statement shows not fifty but sixty thousand to your credit, and the additional ten thousand makes seventy."

One of the checks being for \$10,000, Carnegie promptly handed it back with the remark, "That is something worthy of you. Will you please accept these ten thousand with my best wishes?"

Morgan, of course, refused.

When Carnegie sold the Carnegie Steel Company, Morgan took it at the former's own price. Carnegie later testified that "I considered what was fair; and that is the option Morgan got. I gave my memorandum and Morgan saw that it was eminently fair. I have been told many times since by outsiders that I could have asked \$100,000, 000 more and got it easily. Once for all, I want to put a stop to all this talk about Mr. Carnegie forcing high prices for anything."

Some of Carnegie's general advice to business men is of incontestable shrewdness. Thus he counsels against speculation in stocks, asserting that the consequent worry is too costly simply in taking the mind of the business man off of his normal activities. He takes pains in his recollections to show with what kindness he always treated his employees. A high wage, he believed, was the cheapest. When the Homestead strike occurred, his partners labored to keep him out of the United

States lest he make unjustifiable concessions to the men. Yet when his employees were in the wrong, he never yielded, and he sometimes displayed great tact in getting them to realize their mistakes.

A typical illustration is found in the incident which opens the chapter on "Problems of Labor":

I should like to record here some of the labor disputes I have had to deal with, as these may point a moral to both capital and labor.

The workers at the blast furnaces in our steel-rail works once sent in a "round-robin" stating that unless the firm gave them an advance of wages by Monday afternoon at four o'clock they would leave the furnaces. Now, the scale upon which these men had agreed to work did not lapse until the end of the year, several months off. I felt if men would break an agreement there was no use in making a second agreement with them, but nevertheless I took the night train from New York and was at the works early in the morning.

I asked the superintendent to call together the three committees which governed the works—not only the blast-furnace committee that was alone involved, but the mill and the converting works committees as well. They appeared and, of course, were received by me with great courtesy, not because it was good policy to be courteous, but because I have always enjoyed meeting our men. I am bound to say that the more I know of working-men the higher I rate their virtues. But it is with them as Barrie says with women: "Dootless the Lord made a' things weel, but he left some mighty queer kinks in women." They have their prejudices and "red rags," which have to be respected, for the main root of trouble is ignorance, not hostility. The committee sat in a semicircle before me, all with their hats off, of course, as mine was also; and really there was the appearance of a model assembly.

Addressing the chairman of the mill committee, I said:

"Mr. Mackay" (he was an old gentleman and wore spectacles, "have we an agreement with you covering the remainder of the year?")

Taking the spectacles off slowly, and holding them in his hand, he said:

"Yes, sir, you have, Mr. Carnegie, and you haven't got enough money to make us break it either."

"There spoke the true American workman," I said, "I am proud of you."

"Mr. Johnson" (who was chairman of the rail converters' committee), "have we a similar agreement with you?"

Mr. Johnson was a small, spare man; he spoke very deliberately:

"Mr. Carnegie, when an agreement is presented to me to sign, I read it carefully, and if it don't suit me, I don't sign it, and if it does suit me, I do sign it, and when I sign it I keep it."

"There again speaks the self-respecting American workman," I said.

Turning now to the chairman of the blast-furnaces' committee, an Irishman named Kelly, I addressed the same question to him:

"Mr. Kelly, have we an agreement with you covering the remainder of this year?"

Mr. Kelly answered that he couldn't say exactly. There was a paper sent round and he signed it, but didn't read it over carefully, and didn't understand just what was in it. At this moment our superintendent, Captain Jones, excellent manager, but impulsive, exclaimed abruptly:

"Now, Mr. Kelly, you know I read that over twice and discussed it with you!"

"Order, order, Captain! Mr. Kelley is entitled to give his explanation. I sign many a paper that I do not read—documents our lawyers and partners present to me to sign. Mr. Kelly states that he signed this document under such circumstances and his statement must be received. But, Mr. Kelly, I have always found that the best way is to carry out the provisions of the agreement one signs carelessly and resolve to be more careful next time. Would it not be better for you to continue four months longer under this agreement, and then, when you sign the next one, see that you understand it?"

There was no answer to this, and I arose and said:

"Gentlemen of the Blast-Furnace Committee, you have threatened our firm that you will break your agreement and that you will leave these blast furnaces (which means disaster) unless you get a favorable answer to your threat by four o'clock today. It is not yet three, but your answer is ready. You may leave the blast furnaces. The grass will grow around them before we yield to your threat. The worst day that labor has ever seen in this world is that day in which it dishonors itself by breaking its agreement. You have your answer."

The committee filed out slowly and there was silence among the partners. A stranger who was coming in on business met the committee in the passage and he reported:

"As I came in, a man wearing spectacles pushed up alongside of an Irishman he called Kelly, and he said: 'You fellows might just as well understand it now as later. There's to be no d—d monkeying round these works.'"

That meant business. Later we heard from one of our clerks what took place at the furnaces. Kelly and his committee marched down to them. Of course, the men were waiting and watching

for the committee and a crowd had gathered. When the furnaces were reached, Kelly called out to them:

"Get to work, you spalpeens, what are you doing here? Begorra, the little boss just hit from the shoulder. He won't fight, but he says he has sat down, and begorra, we all know he'll be a skeleton afore he rises. Get to work, ye spalpeens."

Let the business man once begin the perusal of this autobiography he will not want to put it down until he has read the concluding chapter. But when he is through he will probably ask, "Who will be the biographer to supplement this book by writing the business chapters Carnegie omits?"

HIGH PRICES AND DEFLATION

By Edwin Walter Kemmerer, with an Introduction by Frank A. Vanderlip. xii, 86 pp. Princeton University Press

REVIEWED BY WILLARD C. FISHER*

Until the basis and motives of business are changed fundamentally prices must continue to be the center of the business man's interest. And certainly there never was a period in which prices and price movements were of greater interest and importance than in the recent past and the present. Accordingly, this book by Professor Kemmerer of Princeton University is most timely; and it may be read with advantage by any who have either a practical or a theoretical interest in the subject, that is, by any intelligent person.

The purpose of the author is to measure and explain the recent great rise of prices, to trace some of its consequences, and to offer suggestions as to what might be done in the premises. In two words, Professor Kemmerer's explanation and his proposal are "inflation" and "deflation."

He traces the marked rise of general prices the world over to the great increase of money—in America, ultimate gold money as well as paper—and of bank credit, which, as truly as money itself, is found to be a source and measure of demand for goods. He sets aside the explanation which is so much favored by the man in the street, shortened production and supply of commodities, by showing that in the same years which brought the extraordinary rise of prices there actually was a considerable increase in the output of American industry as

a whole. The general effect of the inflation and rise of prices, in other words, the increase and depreciation of money, has been a transfer of some billions of wealth from class to class, from person to person, the vast gains and the vast losses involved in the transfer being alike undeserved by gainers and losers.

Professor Kemmerer now favors deflation, not from any conviction that deflation always is the natural or logical cure for the evils of inflation, but because he believes that, in the present case, deflation, if accomplished soon, will restore to former and rightful possessors some part of the billions of which otherwise they must definitely be deprived.

The conspicuous merit of the book is that it develops its arguments—of which the briefest outline has been given—with a rare combination of close reasoning and simple and lucid statement.

Readers will have but little difficulty in understanding, even those who may not be trained in formal economics, provided only that they are reasonably familiar with the ordinary principles and methods of business and finance.

For the essential steps, stages, or processes by which inflation has done its work are traced in something like concrete detail.

Here and there appear striking statements of truths which are none the less important because many intelligent persons do not recognize them, as where it is shown on

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page 25 that the boasted low *rates* of interest on our national war loans actually meant greater *amounts* of interest:

We bought our low interest rates on government paper at the price of very high prices for commodities. *We kept interest rates down by a policy that kept pushing the price level up.*

The fundamental economic law which makes the interest rate the resultant of the interaction of the forces of demand and supply in the capital market was forcing up the *real* interest rate under the influences of a world-wide destruction of capital and an unprecedented demand. "Present goods were at a large and ever-increasing premium over future goods." The fundamental economic law determining the *real* interest rate could not be annulled by the policy of the Federal Reserve Board of artificially depressing the market rate of discount through inflating the country's supply of bank notes and deposit currency. When the discount rate was artificially pushed down prices bulged up. The government, it is true, paid lower rates of interest on its bonds, but it was compelled to pay higher prices for the war supplies it bought, and was therefore compelled to float more bonds. It paid lower interest *rates* by reason of this policy, but it paid and will pay more *interest*.

Another illustration may be found on page 35 where the present gold dollar is presented as a 38% dollar:

All these general index numbers show an increase in average prices for the most recent dates in 1920 for which figures are available of more than 115% over those of 1913, while all but one (Dun) show prices throughout 1919 to have averaged more than double what they did in 1913. Taking the index numbers of United States Bureau of Labor Statistics as the most comprehensive and most scientifically prepared of the index numbers covering the entire period 1913 to 1919 inclusive, we may say that the wholesale price level increased from 1913 to April, 1920, 165%; in other words, if one calls the dollar of 1913 a 100% dollar in its purchasing power over commodities at wholesale, the dollar of today is approximately a 38% dollar.

There are, indeed, passages through which the reader must go very carefully. For there are principles of money and finance which cannot possibly be made easy reading for the tired business man's after-dinner moments. And it is too bad that, at some half-dozen places, the author did not use a few more words.

The reasoning and conclusions of the book are those upon which there is a general agreement among economists, so that they may be accepted with confidence by any who may be disposed to rely somewhat upon technical authority in problems of this sort.

PERSONNEL ADMINISTRATION

By Ordway Tead and Henry C. Metcalf. xii, 538 pp. McGraw-Hill Book Co.

REVIEWED BY HENRY S. DENNISON*

When the market for credit, labor, or any commodity tightens, the American business man first indulges himself in complaints and then begins to do something about it. This latter is the stage reached with respect to labor conditions in this country. Any book which sets forth concisely and in orderly array the various things which are being done about the matter should properly be listed in the required reading for the degree of "Able Business Man."

Tead and Metcalf's "Personnel Administration" fills precisely this place. It

sets forth an up-to-the-minute body of accepted practices in factory management which few employers can afford to miss. To quote from the preface:

There are no panaceas or cure-alls in the field. The size of this book and the variety of the topics treated will give evidence of this convincingly, if any proof is needed. There is a bewildering variety of methods, practices and activities which must all be simultaneously carried forward if personnel administration is to be effective. This does not mean, however, that they should all be *started* at once. They should be developed as the need for them is felt and as they justify their existence. "Prove all things and hold fast to that which is good."

* President of Dennison Manufacturing Company, Framingham, Mass.

There has been in some organizations an unfortunate tendency to overdevelop some one activity which was of special interest to some executive. But the time is past when hobbies or pet ideas should be allowed to develop at the expense of a rounded human relations policy. The surest index of a personnel executive's grasp of his problem is his ability to keep a sane proportion in the unfolding of his different administrative tasks.

For the man who thinks he can afford not to read the whole book, it is most conveniently chaptered and subtitled and has a comprehensive and apparently thorough index. Several chapters of particular merit stand out.

The merits and mode of treatment of Chapter II are shown by two quotations; one on "Creative Impulse," and the other on "Desire for Justice":

The best possible answer to this contention is that in modern industrial life another native tendency has been all but forgotten. That tendency has been variously spoken of as the "creative impulse," "the instinct of workmanship," the tendency toward contrivance. The fact behind these names is of tremendous importance. People, especially in the temperate climates, prefer activity to idleness; they prefer activity to which use is imputed or in the accomplishment of which honor and approbation are to be gained. They prefer activity where some tangible monument of achievement remains. People universally have a passionate desire to be recognized by those around them as counting for something. And they know that they count for something only as they act. The action may take queer, perverted forms because no direct channels seem to offer; but fundamentally the action which counts in terms of self-satisfaction and of group approval is action which is in some way creative.

This desire to be creative is fundamental in human nature. And for this reason failure to find a channel for its expression may result in serious difficulties. For the suppression of basic natural tendencies is known to be potentially disastrous. There may, where repression has been long and intense, be varied manifestations of suppressed desire. The creative desire may finally work itself out in destructive ways, or in trivial, useless ways, or in channels and "movements" that appear not to be in line with the individual's natural interests. But that it will work out in some way, we know; and the task of individuals and groups is to find it some positive outlet.

Related to the desire for knowledge and for ap-

proval is a deep desire for justice. Contradictory as may be the forms which this demand takes from decade to decade, men are still eagerly searching and are still never satisfied until relationships, institutions and opinions seem to them "just." The appeal of the "square deal" has not been in any definition or specific application which it ever received, but in the universal demand of people that in so far as they have knowledge about a situation, "fairness" shall prevail.

As applied to the industrial problem, this idea of fair play is, of course, especially baffling, but there do seem to be emerging several ideas which lend it definiteness. That there should be some approximate relation between expenditure of effort and reward is now thought to be "fair." That passive ownership is sufficient justification for the receipt of income is, conversely, being increasingly thought to be "unfair." That full authority over shop affairs and terms of employment should be vested in the management alone, is also being questioned by many as "unfair." That the continuance and extension of the basic, essential industries should depend upon the willingness of private investors to lend money, is another condition which some groups in the community believe "unfair."

Chapter IV presents an orderly analysis of the functions of the personnel department and has a most suggestive chart.

Chapter V contains the following hints that the rough-and-ready methods of labor scouting will hardly do in the days of competition for laborers in the coming years:

"Labor scouting" was a familiar activity before the war, which became deservedly unpopular with progressive managers during the war because it meant "stealing workers" in ways not altogether honorable nor conducive to shop and individual efficiency. Cultivation of sources of labor supply must be a more considered, scientific and justifiable procedure than scouting. It must be rather an attempt on the part of managers so to bring the advantages of working in their plants before qualified groups of workers, that they will want to apply for any openings which occur. It is a matter of organizing the community's good-will toward the plant—of creating an attitude toward the factory in working class centers which makes people really interested to apply for a job. It is creating a legitimate differential between the desirability of working in any plant and the superior advantages of working in a particular plant.

Some manufacturing companies build up their executive staff almost entirely by "scouting."

Their employment chiefs periodically visit universities, graduate schools of business administration, and technical institutions. These representatives describe in a personal talk to graduating classes business opportunities open in their industry, and invite application for positions. Since many educational institutions have added to their curriculum courses on the human relations in industry, alumni groups from these courses will be a valuable source for new workers in the personnel field.

In calling attention to sources of supply for executive positions, it would be unfortunate, however, to slight the factory itself. Organizations which hold to a policy of "promoting from within" have in their own ranks people who know the business and its traditions, and who would be greatly stimulated by the assurance of promotional opportunities.

A restrained discussion of pioneer methods of selection and placement is printed in Chapter VI.

The idea of the labor audit originated by Robert Valentine, to whom the book is worthily dedicated, is developed in Chapter XXI. In it the authors thus ask and answer their question, "What is a labor audit?"

The labor audit offers a method for the diagnosis of an organization's labor relations. It can state and define the problems which do or may directly effect the labor relations of an organization. It can provide a method of investigation which will lay bare symptoms of unsound conditions. It is perhaps the nearest possible approach to an instrument of precision, a probe for industrial ills in a factory, store, railroad, mine or other industrial unit. And it provides a method for an orderly record of facts or of the progress of events. It requires, therefore, a tactful method of personal approach, a ready knowledge of the usual symptoms and ills, and an open but firm determination to see that the right advice is not merely given but acted upon. What, then, is a labor audit?

The labor audit is a reasonably exhaustive and systematic statement and analysis of the facts and forces in an industrial organization which affect the relations between employees and management, and between employees and their work; followed by recommendations as to ways of making the organization more socially and humanly productive and solvent.

The discussion of the fundamental principles of shop committee organization in Chapter XXXII is good enough to deserve outside covers of its own. Its richness in excellent material makes it hard for the

reviewer to select scattering bits which shall indicate the pivotal points developed by the authors. The steps, to some extent, are indicated by the following extracts:

The war had the effect of accelerating group relations between managers and their workers. Representative action in the discussion and determination of shop policies and procedure increased significantly. The necessity of uninterrupted production encouraged employers and especially the Government to assure some channel of free communication between the parties so that strikes and high labor turnover might be avoided. And the result was an unprecedented extension of the use of shop committees and collective bargaining.

The idea that committee action might reduce ill-will and friction had been comparatively untried in American plants before the war. And it was only in an almost frantic resort to every possible expedient that committee action got its trial. Happily, and somewhat to their surprise, many managers were pleased with the results, and would not now abandon the new methods of joint dealing.

Nevertheless, as a procedure for general application the movement for employee representation, or the shop committee movement, is still in the experimental stages. Seventy-five per cent of the plans now operating are less than three years old; and thirty per cent are less than one year old. It is, therefore, too early to discuss the success of the movement with any great array of evidence. But it is profitable to consider the reasons for this movement; the different types of employee organizations; their relative merits from the point of view of effective business values and the draw-backs as thus far revealed.

...

The motives which have led employers to study and put into operation shop committees are naturally numerous and often mixed. The dominant aims may, however, be divided into those which are negative and those which are positive.

The principal negative motive is fear—fear of the action of trade unions. The claim is frequently voiced that "if I give my workers a voice in controlling conditions in our shop, there will be no place for any outside organization." The idea is to anticipate the union organizer, to create an intra-plant "collective bargain," "to deal only with my own men." It is the honest conviction of many employers that they can not only preclude union action by some sort of committee action, but that they can deal more satisfactorily with their own workers in the absence of all outside interference.

Of the positive motives there are several—some which stress the production arguments, some the human. One of the frequent causes of employers' interest in the committee movement is the desire "to get production on a better basis." Indeed, there is a danger that employers who are handicapped by old plants, worn-out equipment or inadequate methods of control and superintendence, will try to make shop committees responsible for the correction of shortcomings which in reality the management should remedy. Casting about for "a solution of the labor problem" which will save them the hard work of competent management, some employers have seized with more enthusiasm than discretion upon shop committees.

Other companies have seen more clearly that there is a psychological connection between representation in shop affairs and interest in work. They know that the experience of some plants where workers have conferred on production problems has been decidedly beneficial to production and to morale.

Far-sighted industrial leaders are also finding in the committee movement an educational medium of great value. They realize that employees, if they are to take interest, assume responsibility, display initiative and share further in industrial control, must know the inner workings of industry and must know how to act in executive capacities—or at least know how to advise with those in executive positions as to what the administration should be. And they see in any form of group action which gives employees in some organized way a knowledge of management and a chance to deliberate with the management, great educational possibilities. Employee representation can, they believe, be the cradle of industrial democracy, as the town meeting was of political democracy.

Up to a certain point the problems of adopting and administering shop committees and employees' associations are the same; certain principles of procedure are common to both.

The first principle—the one which should preface every discussion of method—is that the best forms, methods and machinery known are of little avail if they are not animated by a *sincere, genuine and liberal intention*.

A second essential step in giving evidence of the right spirit is to have the employees *consider with the management from the start, what the plan shall be*.

John Stuart Mill, whose essay on "Representative Government" should be read by every manager who is considering the institution of

employee organizations, says relevantly to such a situation of passive acquiescence:

It is also to be borne in mind that political machinery does not act of itself. As it is first made, so it has to be worked, by men, and even by ordinary men. . . . It needs, not their simple acquiescence, but their active participation; and must be adjusted to the capacities and qualities of such men as are available. This implies three conditions. The people for whom the form of government is intended must be willing to accept it; or at least not so unwilling, as to oppose an insurmountable obstacle to its establishment. They must be willing and able to do what is necessary to keep it standing. And they must be willing and able to do what it requires of them to enable it to fulfill its purposes.

Preliminary educational work of a personal sort among the employees or the leaders of employees is indispensable to a sound beginning of shop committees. "A people," says Mill later in the same essay, "may be unprepared for good institutions; . . ."

The administration of all work incident to the adoption of employee representation should be placed with the personnel executive; and he and his staff should take time enough to do the necessary follow-up work at every point.

There is some question as to how detailed the statement of responsibilities and the grant of authority should be. If a specific understanding on these matters can be agreed to by both sides when the plan is under consideration, that simplifies the immediate problem. But to raise at the outset question as to how far the plan is to go in turning over problems for the employees to consider and solve, may raise issues which can be more satisfactorily met when the plan has been in operation for a time.

However, some of the best shop committee plans provide from the start that *all matters of mutual interest* may properly be considered by the employees' bodies. And such a provision can usually be introduced to advantage, if the management is prepared to go that far. For it will in general be found true that employees only call attention to and demand consideration of problems which they think affect them; and that *they ask to exercise authority only when they are close to the point where they are able to exercise it*. This last statement is open to exceptions; but the history of the rise of all groups to self-government tends to bear it out.

Incidentally this book has its place also in the curriculum of the social theorist. It has to do with the actual detailed problems of the management of groups of human beings, and will do its bit toward delivering

social theory from the nebulous alchemic stages of very pure theory and giving birth to an applied sociology—to a science of social engineering.

Men interested in the structural principles of social engineering will recognize the acceptance by the authors of such factors, supplementary to simple military authority as advisory committees, preliminary analysis of facts, and preliminary discussions with the affected groups to develop understanding and avoid surprise. They will hope in a second edition for a chapter devoted to a tentative listing of the essentials of organization and the exact nature and conditions of authority, for which the book is full of suggestive material. The authors say:

Historically it has probably been true that improvements in management technique have been largely enforced by the pressure of competition or of labor demands. But the time has come when this should be true no longer. This conception of management as a profession, standing ready to make truly scientific the application of human energy to material, is destined as it extends to increase surprisingly the potential productivity of industry.

The service of this book to the social student and its service to the business world, still more, could have been much improved if the authors had denied themselves entirely any indulgence in long-range

social theorizing. A not inconsiderable number of business men who ought to make "Personnel Administration" a book of constant reference for themselves and their subordinates will be repelled—whether rightly or wrongly is of no consequence—by hints of a desire to shatter the "sorry scheme of things entire" to little bits and then to "build it nearer to the heart's desire."

With these exceptions—which are numerically of much less consequence than they are psychologically—the attitude of "Personnel Administration" is extraordinarily well balanced. It is delightfully free from overenthusiasm for any new management stunt, and so entirely emancipated from the panacea-complex that it even denies salvation for our industrial community through good management alone. On such subjects as over- and under-organization, the limitation of activities and expenses to what can be justified by sound business sense, and the newer proposals for methods of selection and placement of employees, a common-sense attitude, which is judicial without being skeptical, has been fully maintained.

The reader is better equipped by this book to use his own good judgment on these and many other parts of the personnel problem than by any book within the reviewer's knowledge.

CHAOS AND ORDER IN INDUSTRY

By A. H. D. Cole. 290 pp. Frederick A. Stokes

REVIEWED BY G. W. LEAVITT*

Industrial unrest as it exists today in Great Britain is interpreted by this eminent economist and protagonist of Guild Socialism as but a part of a wider unrest extending through every element of British society, in which the two chief combatants are "the workers by brain and hand on the one side, and the rentiers and financiers on the other."

* Formerly with the Executive Staff of The National Industrial Conference Board.

As an advocate of the National Guild movement, he sees no way out other than through the evolution of some system of Guild Socialism and "democratic self-government in industry and elsewhere."

Mr. Cole frankly states:

For this book is not an account of National Guilds, but an attempt to apply Guild Socialist principles to the present economic situation.

"Chaos and Order in Industry" is

characterized by an open-minded attitude toward the facts presented in so far as the possible development, in detail, of socialization is concerned but its author's attitude toward capitalism is expressed frequently and in a variety of ways. The opening chapters clearly show his apparently unalterable opposition to such a form of economic organization:

The average business man is probably no worse morally than the average man in other spheres of society, except in so far as his occupation is actively demoralizing; he is a part of a system, and that system is immoral and beastly.

Throwing the capitalistic regime away thus entirely, as hopelessly corrupt and in itself containing no good thing, the author sees no good in any movements which tend to correct the evils of such a system, and to preserve it.

As a presentation of conditions in certain major industries the book is well balanced, highly suggestive—as regards British industrial problems—and written with great candor *barring its socialistic bias*.

The reader is continually impressed, however, in perusing its pages, with the multitudinous ways in which the industrial situation here in America differs from that in Great Britain.

Mr. Cole says:

The plain fact is that all over Europe, and to an increasing extent in America also, the armies are mobilizing for something like a class war. Economic movements have a rapidly growing tendency to become also political, not only because the workers possess a greatly increased power and are far more conscious of it, but also because their economic claims are animated by a steadily deepening hostility to the whole capitalist order of society. Not only do the workers feel stronger, they have also a growing feeling that capitalism is insecure.

With all that may be said of industrial unrest in America and of the presence of so-called radical thought in the United States, it is very much open to question whether any appreciable or at least strategically important number of the workers have traveled very far on such a path as has just been described in the preceding quotation from the book.

In his closing chapter on "The Real Class Struggle" the author asserts much about the all-inclusive reach of this problem of class-antagonism. He says, on page 237:

In America the younger groups of "Employment Managers" trained in the reactionary school of "Scientific Management," are revolting towards the idea of a more democratic industrial system.

In a certain few industries where conditions have been unusually detrimental to the workers it is true that there are "employment managers" who today are being won over to the idea of some such ultimate change in industrial organization as Mr. Cole has in mind, but the rank and file of this group are committed to a method, utterly different in its conception, of treating the diseased organism of industry.

Not employees alone but an increasing and very powerful group of employers are today advocating and testing various practical ways of putting the method into effective operation.

This method, briefly, is the establishment of a vertical relation in industry between capital and management and labor, as over against the horizontal relationship of class and class.

Only recently a visitor from English shores, in addressing an industrial group in Boston on his impressions of American industrial conditions, said that he believed Great Britain had overlooked something in laying all its stress upon the horizontal relationship and failing to discover the efficacy of the development of a vertical relationship as expressed in the best forms of employee representation.

If America were helplessly following a little bit behind in the footsteps of England in industrial matters and in all others, as some choose to suppose, "Chaos and Order in Industry" should certainly go onto the shelves of the plant library and be pondered. Such a supposition, however, requires demonstration.

"Chaos and Order in Industry" is a volume of little help to the American business man in facing his own problems.

SPECULATION AND THE CHICAGO BOARD OF TRADE

By James E. Boyle. v, 277 pp. The Macmillan Co.

REVIEWED BY ASHER HOBSON*

Is the Chicago Board of Trade 99 45/100 per cent pure? The one small blot on an otherwise spotless certificate of service consists of the 7 pages out of the total 208 given over to the chapters on "Evils of Speculation" and "Program of Reform."

The introduction explains that "Speculation and the Chicago Board of Trade" is "really a report." It is more. It is a defense. Tersely, it is a defensive report of the operation of the Chicago Board of Trade, plus an analysis of the inevitableness of speculation and the advantages of organized speculation.

It seems as if the position taken by Professor Boyle, that of a whole-hearted defender, is due in part to a conscious effort to counteract the many current misconceptions regarding speculation and the influences of organized exchanges. But the reader of the book may well question whether this effort is not carried to unwarranted extremes. Economists and business men generally have long recognized that organized exchanges perform necessary services and have a legitimate place in the field of market distribution.

It is doubtful, however, if either economists or business men, to say nothing of the lay public, will accept some of the arguments set forth in support of these services. For instance, the first section of the book tries to establish the points summed up in this resume:

The Board of Trade is an efficient piece of Market Machinery; it is operated at a low margin of cost; it is an open and competitive market; it is operated under democratic rules of self-government controlled by a Board of Directors in the public interest.

One may grant that organized exchange may perform a necessary function without accepting unreservedly such an assertion. Furthermore, most students of economics

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will accept in modified form such statements, but the reviewer questions the acceptance of some of the arguments used to substantiate them.

The assertion, for example, that "grain is handled by the 'middlemen' on the organized exchanges at the lowest margins of cost of any commodity" is supported by a comparison of the 1 per cent charge of commission merchants and brokers operating on the exchange with the 15 per cent margin of the retail distributor of a certain make of motor cars, the 19 per cent margin on dry goods, the jobber's charge of 8.4 per cent for selling the products of the California Fruit Exchange, and the retailer's margin of 29 per cent on the same product.

Here one has a charge of 1 per cent for the handling of grain, a stable commodity, of high specific value, compared with other farm products, dealt with in large lots by commission merchants and brokers who have no money invested in the commodity, who bear no transportation, distribution, or storage charges, who assume no expenses for physical handling. The charge is in payment for a sales service which in no way involves the assumption of a money risk on the part of the one who makes the charge.

This 1 per cent on grain is compared with charges for the retailing of motor cars and with the charges for the handling of dry goods and fruit by those who have their own funds invested in the commodity, who assume the risks of a falling market, who furnish display rooms and warehouses, who defray physical handling costs, who in the case of fruit assume the losses from shrinkage and deterioration, and who in addition must stand the many incidental expenses involved in catering to the demands of the individual. The charges are not comparable, for the services rendered have little in common.

The fallacy of attempting to prove that organized exchanges operate at low cost by comparing the brokerage fee of their members with the charges for retailing automobiles and fresh fruit, demands no further discussion. Yet one cannot well refrain from asking why the author did not compare the 1 per cent charge for handling grain on the exchange with the usual commission and brokerage fees of \$15 per car on live stock, \$5 to \$10 per car on potatoes, and $\frac{1}{4}$ cent per pound and less on cheese in large amounts. Here the services performed are similar. Furthermore, it will be found that the above charges often amount to less than the much boasted 1 per cent.

The author also contends that the organized exchanges furnish "an open and competitive market." In this connection it is well to consider that membership of exchanges is severely restricted. Consequently, all but a limited few must do their trading through a second party—a member.

This is well and good as long as the interests of the member are in harmony with the interests of his customers. Certain evidences would tend to show that such harmony does not always exist. One may not fairly contend that organized exchanges do not furnish "an open and competitive market" but one may well contend that the forced dealings through a second party put a limit on the "openness."

Many "corners" and attempts to "corner" are described in this book. Rarely were any of the members involved in these actions expelled by the exchange. It would seem as if action was taken only when influential members suffered abuse.

For instance, the reader finds on page 63:

The September corn corner squeezed many prominent members of the Board, including the President. The Board passed the following Resolution against corners October 13, 1868:

The resolution mentioned condemns "corners." Its effectiveness is described in two short sentences:

But alas for this good resolution! It went the way of many good intentions.

Again, the reader finds on page 67:

The Kershaw corner of 1887 was the most disgraceful deal in connection with the whole history of the Board of Trade. It was frankly a premeditated raid by a few outsiders, aided and abetted by a traitor to his associates of the Board of Trade. It should have been treated by the Board for what it really was—an act of piracy.

The onlooker may wonder whether it is a greater crime to "raid" from the outside in, than to "raid" from within out. Rather than to say that the exchange is operated "under democratic rules of self-government, controlled by a board of directors in the public interest," one strongly suspects that it is primarily governed in the interest of the members.

One more contention is challenged. The author credits the Chicago Board of Trade with the breaking up of the dealers' grain monopoly and with the destruction of the strangle clutch of the line elevator companies upon producing sections.

The victory is described in the following words:

It is fortunate, therefore, for the country shipper (and the farmer back of him) that in the fifty-year anti-monopoly fight on the Chicago Market, the Board of Trade won . . .

Certainly this assertion brings a broad smile to those thousands of farmers who unceasingly fought against the grain monopoly. This fight began with the granger movement in the early seventies and lasted to a recent day: a continuous battle fought by the farmer at home with his co-operative elevator, and fought in the state legislature by his representative. It has been accepted by agricultural historians as a farmer's movement won by farmers.

To sum up the criticisms just made it should be explained that they are not meant as a condemnation of organized exchanges. The substantial services of these exchanges are recognized. Yet it must be admitted that they have their bad points along with the good ones. That all is not perfect is indicated by the fact that the Chicago Board of Trade is at the present time undergoing an investigation by the Federal Trade Commission. This investigation had its inception in numerous complaints from the wheat belt. These objections are raised for the purpose of estab-

lishing the point that the Chicago Board of Trade is an institution composed of human individuals.

Notwithstanding the use of the superlatives in praise, Professor Boyle has made a distinct contribution to economic literature. His contribution lies not in the form of a "disinterested" discussion of the Chicago Board of Trade, but rather in giving the layman a detailed picture of the physical make-up of the exchange, and an intimate view of its organization and structure. The nature of the operations and their volume are matters well worth describing.

No small part of the value of the book is its historical description depicting the evolution of certain trade practices.

Professor Boyle has gone further, perhaps, than other economists in analyzing the nature of speculation and explaining its persistent and ever-present characteristics. Here again, many of his readers will hesitate in going the full way with him, and in accepting all his illustrations as proving the point. His discussion will do much toward correcting current misconceptions held by the public generally, regarding the practice of speculation.

PRINCIPLES OF ACCOUNTING

By Albert Claire Hodge, and James Oscar McKinsey.
xiv, 389 pp. The University of Chicago Press

REVIEWED BY ERIC L. KOHLER*

This book, say the authors, is designed for the college or university student who expects "to become a business executive of one kind or another" (p.1). Through the use of reports as a means of business control the prospective business manager finds an acquaintance with accounting essential to his training. A "report," we are given to understand, is a written report, purporting to state "certain facts about the business" or to outline "plans contemplated in the conduct of the business" (p. 3). In fact, the primary function of accounting is to furnish reports which will "aid in solving the problems of the internal management of the business" (p. 6). However, "the student must content himself for the present to deal with reports only as typified by certain simple and conventional kinds" (p. 11), which proves to be the balance sheet and statement of profit and loss. Later (p. 55) we are told, rather vaguely, of "special reports of a statistical nature which will be considered in subsequent chapters," but our survey of succeeding pages yields us only additional balance sheets and statements of profit and loss.

Perhaps the authors forgot, in the same sense as they forgot both introduction and index.

A new text must justify itself either by introducing new material or by a rearrangement of old. As to new material, the authors make no claim. "These simple, conventional types (of reports) will be studied, together with certain conventional types of records" (p. 11). It is in the presentation of everyday accounting facts that the authors may lay claim to originality. After two preliminary chapters, the balance sheet and profit and loss statement are introduced, in small doses, with appropriate hesitancy, and the principal accounts in each are briefly described. This is followed by a further description and analysis of the accounts of a simple business including an outline of the debits and credits in various accounts (Chapters VI and VII). The function of and forms for journals do not appear until chapters XI-XIII. The remainder of the book, eighteen chapters, is devoted to an elaboration of the subject matter indicated.

While the general content of the first few chapters may be commented on favorably from the point of view of good peda-

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gogy, the latter half will be found to be very much at variance with established methods of teaching the subject. First of all is the arrangement. "Cash," for example, requires portions of nine chapters (III, V, VI, XV, XVIII, XIX, XX, XXI, and XXII) for its complete elucidation; accounts with merchandise occupy parts of eleven chapters. Special columns for controlling accounts make their appearance before the controlling accounts themselves. Capital accounts are discussed after the books have been closed.

Many of the conclusions drawn from the comparative balance sheets in chapter XXX are not warranted by the facts stated. Certainly the embryo executive should not be encouraged in making such ill-digested analyses as these. From the comparison of capital asset accounts the following deduction is made: "A \$5,000 item of addition or (sic) improvement to the building also points to a progressive policy on the part of the company" (p. 357).

Equally optimistic is the statement that "a slight increase in office equipment would seem to indicate some increase in the volume of business."

Again, certain material seems to be somewhat irrelevant. Negotiable instruments are described at great length and include illustrations of the ordinary bank check and express money order.

The student is instructed concerning the preparation of bank deposit slips and the analysis of bank statements but is not informed as to the character of the reconciliation that may be effected with the cash account when the statement is rendered. Nor does he learn that an account may be kept with the bank or special columns for banks provided in the cash book.

A more serious omission is the failure of the authors to recognize that one of the purposes of an accounting system is to provide machinery whereby the business may operate. An accounting system cannot be diverted to the exclusive function of supplying the management and outsiders with reports, and it is doubtful if the prospective business executive can be made to appreciate the nature of the accounting problem existing in modern business if it be limited to the simple expedient of obtaining summarized statements of information. The accuracy with which transactions are handled often outshadows in importance the preparation of statements of financial condition and results from operation.

Thus limited in scope, "Principles of Accounting" will find advocacy among those who teach that accounts exist principally for the convenience of managerial reports.

THE ENGLISH OF COMMERCE

By John B. Opdycke, with an Introduction by Frank A. Vanderlip. xvi, 435 pp. Charles Scribner's Sons

REVIEWED BY HUGH E. AGNEW*

If it were possible to write a book to supplement the dictionary, so that no matter what questions might arise about one's language, or the right term to use, the standard abbreviation, the quantity term for every kind of measurement and the correct address for every official from dog warden to most illustrious potentate

—if such a book were possible—it would find a place in a very large number of business offices. So far, it has not been attempted, but an approach has been made by the ambitious author of the volume mentioned at the head of this review. It is not exactly an encyclopedia of English as used by the butcher and baker and candle-stick maker, but it presents the largest amount of heterogeneous informa-

* Member of the Editorial Staff of *Printers' Ink*, New York City.

tion that we recall meeting within the limit of 435 pages.

If one would know how to write an advertisement, a news story, a wedding announcement, a cablegram in cypher, a business letter, an editorial, a head line or any one of a number of other forms of communication or business literature, one can find instruction in "English of Commerce." Indexing, filing, proof reading, spelling, and punctuation have not been forgotten. One is told the difference between a newspaper and a magazine and the purposes of advertising literature. Business forms, including contracts, ejectment notices, powers of attorney, promissory notes and counter sales slips suggest the variety of subjects touched upon by the book.

There can be no question that a large amount of the information given in this volume would be valuable in a business office. Especially such lists as those of recognized abbreviations, commercial terms in common use, correct forms of address for different functionaries and foreign words and phrases.

For the man studying by himself there are plenty of problems which test his ability to apply the rules of the text. Indeed, the volume is intended as a textbook as well as a hand book and source book. Its chief weakness is that it attempts too much.

As stated in the preface:

The plan of the book is this. The first four chapters attempt to give a thoroughgoing drill in the fundamentals of good English. The

following four chapters deal with subjects special to the pursuits of business. Chapters nine, ten and eleven contain materials more for reference than for study, to be consulted in connection with the work of the foregoing chapters and sections. The content throughout is presented from the commercial angle.

The last statement is particularly true. Examples of good English are selected from current business literature, rather than from the classics. For the most part the selections are excellent. They are taken from business magazines, house organs, advertisements and actual business letters, etc.

The misfortune of having to change printers eight times before completion, together with evident carelessness and lack of thoroughness have left the author plenty of opportunity for improvement in subsequent editions. For instance, the definition of "Non negotiable" starts, "not to be transferred or changed for less than face value." That is misleading, and confusing.

Other errors quite as serious are not uncommon. But if the author persists, strengthening the material he has, improving the arrangement, eliminating that which does not properly lie within the province of his title and eradicating errors, he may yet succeed in creating a book that will supplement the dictionary.

Mr. Vanderlip in his introduction confines himself to the discussion of the improvement that is desirable in business English and the better business that better English will bring about.

TEN MINUTE TALKS WITH WORKERS

A collection of articles reprinted from The London Times. 208 pp. Doubleday, Page & Co.

REVIEWED BY LOUIS WILEY*

"Ten Minute Talks with Workers" is a well-written explanation of our present economic system, presented in simple lan-

* Business Manager of *The New York Times*, New York City.

guage. The talks are based on recognized principles of political economy. The relations between capital and labor are fairly and clearly defined and the operations of economic laws are explained.

The author's characterization of the "trust" as a useless and unprofitable method of increasing wealth is new to many persons, but indicates a principle not clearly understood, to which many economists are giving careful study. He touches on other faults in our present industrial system which have been developed through the growth and expansion of manufacturing and commerce, several of which are not fully comprehended.

The author, however, has taken little account of the human element and his book contains practically no contribution that will assist in the settlement of the present discontent and dissatisfaction of wage earners. It is a true picture of industrial conditions today; but there is omission of reference to the ambitions, yearnings and other qualities of the human heart, which so frequently upset all theories and laws.

The following talk on "The Partners" will illustrate not only the subject matter but also the mode of treatment found in the book:

If you have read Robert Louis Stevenson's stirring tale, "Kidnapped," you will remember how David Balfour and Alan Breck, when they were hiding on the mountains and had nothing to eat but a little porridge, added to their food by groping for trout in the stream. Groping for trout is catching them with your naked hand, by feeling for them very gently under the banks and between the stones, and grabbing one, if you can, when you feel him. With much effort David and Alan managed to catch a few small fish.

The stream trawler goes out into the deeps where the fish shoal by the million. It has every modern appliance—steam winches, miles of nets, storage for hundreds of tons of fish, a skilled master, and experienced hands.

Alan and David could supply themselves with only one or two small fish. A modern steam trawler can feed a sizeable town. The difference in results is enormous. In one case you have individual and primitive effort, in the other the union in modern industry of three partners, each contributing a share to the final result, but each dependent on the other two.

The first of these partners is, of course, Labour. The trawler will lie in the harbour till it rots if no men go on board to get up steam and head her to the fishing grounds. Nowadays practical men of affairs, anxious only to obtain the best results, have learnt to

regard Labour as what it is, namely, one of the partners in industry. It is neither more or less. But if Labour is to maintain its title to rank as a partner it must act as a partner. It must contribute its share to the joint concern gladly and fully. That done, Labour is entitled to a full share of the results achieved.

The second partner is Capital. In the earliest days of human existence on the earth man must have caught his fish as David and Alan caught their trout, but mingled with the bones of later men are found the rough fish-hooks which they had invented to aid them in their fishing. These fish-hooks then represented the capital just as in our times the steam trawler does. So many people make the mistake of thinking that capital is another word for money. Generally things are capital.

The man whose patient labour made the fish-hooks was entitled to a share of the catch, and today the claim of Capital to rank as one of the partners in industry is just. If by some unfortunate miracle the whole of the capital of the United States and Great Britain—their railroads, their mines, their buildings, their works, their plants, their tools, their roads—were whirled skyward in the night, the people of both countries should once more be a mass of unaided men struggling grimly with the bare gifts of nature for a miserable livelihood. Every man who saves instead of spending, who works today and postpones enjoyment till tomorrow, who sows in spring in hope of a harvest in autumn, adds to the available amount of capital, adds, that is, to the apparatus by which Labour increases its own efficiency.

The third partner is Brain. If you watch a village smithy where the blacksmith, who is in part a capitalist, works alongside his man, you may think that so far as the smithy is concerned it would make little difference if master were man and man were master. As the scale of industry grows, as works get larger and larger, buying raw materials and selling finished articles in every corner of the globe, the need for men of brains, able to direct and organize all these lines of activity, becomes obvious.

We cannot go back to the methods of our forefathers; in attempting to do so we should, like the Bolsheviks in Russia, bring our own civilization down about our ears, for there are a dozen mouths to feed where there was once but one. For the great operations of modern industry the best brains of the country are required. Brain ranks with Capital and Labour as a partner in industry.

A study of the condition of the world three

or four hundred years ago shows that wonderful progress has been made. Progress is many-sided. It is moral, spiritual, political, civic. These are the finer aspects of progress, but behind them lies economic progress, the winning of a life more full of the good things

in life; and this economic progress has been due to the growth in numbers and capacity of the three partners of industry. Their future depends upon the recognition by each of them of their mutual dependence and their common interest.

MERCHANDISING STUDIES OF THE STATES

*By Archer Wall Douglas. iv, 178
pp. The Ronald Press Company*

REVIEWED BY MERLE THORPE*

The ambitious man, professional or business, longs to extend his field of operations. That is the yardstick of success. If a man stands still, after a while friends—and enemies—begin to talk quietly about him. So the enterprising man searches for new fields, scrutinizes new opportunities.

Every business is a shadow of some one man. Some shadows are short; some tremendously long. The long shadows come from the man who sees beyond his township, county, state, continent. Subtract the factors involved in a small business of \$1,000 a year from those of a business of \$1,000,000 a year, and you will get (1) desire; (2) ambition; (3) ability.

See America first! The proposition is so simple I hesitate to set it down. Many young and ambitious business men wrinkle their brows and study possibilities in China, India, and South America, overlooking those nearer at home. The leap into successful trade overseas is much shorter from a well-established domestic trade—and more natural. Wonderful opportunities lie in Arkansas, North Carolina, Michigan.

The author of "Merchandising Studies of the States" is the Chairman of The Committee on Statistics and Standards of The Chamber of Commerce of the United States. He gives the reader the benefit of a farsighted business man's survey of these domestic possibilities which lie outside our own door. To quote from the book:

In every phase of business life that looks to the future of its activities there is always necessary

the perception of great changes and great opportunities *before* they occur and *not afterwards*. A business enterprise is not an isolated unit working out its own salvation alone, but depends upon and is a part of the history of progress and development of the section of country in which it finds a market for its wares. It must know not only the existing conditions of the people and country which it serves but likewise the potentialities and possibilities of their future development. The means thereto is such close and intimate study of the situation as discloses both its present likelihood and also what the future holds in store.

Mr. Douglas sets forth the purpose of his book as follows:

It is the purpose of these chapters to set forth the story of certain states, as types of those studies in the development of the country that must be part of the policy of every great organization which seeks to found its business upon intelligent study of the possibilities and likelihoods of the future.

The particular states selected by Mr. Douglas for discussion include Arkansas, Kansas, North Carolina, Wisconsin, Ohio, Texas, Colorado, and California.

On the subject of statistics Mr. Douglas speaks with authority when he says:

Statistics are sure to be misleading unless you know from personal study and observation the facts which produced them. That is why so many writers on economics, who know only statistics, are mere blind leaders of the blind. There is but one way to reach a true conclusion and that is by personal study and observation. Statistics, books of information, stories of what others have seen, all have their place provided

* Editor of *The Nation's Business*, Washington, D. C.

they are supplemented by one's own experience, otherwise they are but broken reeds to lean upon and lead only to half-truths and misconceptions. There is much to be got from those who have acquired their knowledge by hard contact with actual facts in the workaday world. Such people are usually of the plain every-day variety, and often know only one or two elemental and vital things. But they have these solidly imbedded in their consciousness. It is always well to check up your own experiences and observations with those of people of this type whenever you are able to do so. It frequently saves you

from being carried away by theories at the expense of common sense and facts.

In "Merchandising Studies of the States" there is no dark formula for the reader who wishes to enlarge his business—that cannot be given; if it could, all the zest would be taken out of the contest. But there is for the man who will patiently fill in between the lines, a chart drawn by one of America's successful business men, which will point the way to longer shadows and greater turnovers.

EMPLOYEES' MAGAZINES

By Peter F. O'Shea. ii, 122 pp.

The H. W. Wilson Company

REVIEWED BY FRANCIS B. FRAZEE*

In view of the part played by the employees' magazines in modern industrial relations, it is surprising that the literature on the subject is so scant. The author of "Employees' Magazines" makes a distinct contribution to the subject, especially for those who are editing and making magazines for the employees of factories and industrial plants.

Its foreword well expresses the change that has been made in the shop papers:

The value of the printed word in organizing, educating and managing large groups of employees in industry is greater today than ever before. Modern conditions make it increasingly essential to gain the voluntary co-operation of the worker if success is to result. The old paternalistic shop paper which reached down to pat a man on the shoulder is out of date. But the modern house magazine, alive, sincere, human and constructive, has tremendous opportunities, that have been greatly increased by the wide-spread growth in intelligence and interest among workmen the country over.

How the shop paper can overcome impersonality and restore acquaintance is illustrated by the following analysis on acquaintances possible in a shop:

- Of a man with his neighbor personally
- Of a man with his neighbor's work

Of department with department

Of plant with plant

Of plant with office and office with plant

Of workmen with executives

From this analysis arise two supplementary ideas—co-operation and unity. Both of them can be served by the shop paper.

To what extent the management should control the shop paper is summed up as follows:

The manager pays for it. That is all he does. In fact he should desire, both as a gentleman and as a wise manager, that the employees forget the matter of payment as soon as possible. In other words the manager buys the ticket, then he gets off the train. He does just the same thing for a salesman. No manager, just because he pays the fare of one of his salesmen, would think it necessary to do the traveling also. The shop paper is a salesman which the manager sends traveling in his factory.

The author develops this idea that the shop paper is a salesman by listing the goods sold:

- The employees to each other
- The departments to each other
- The plants to each other
- The management to the employees

To illustrate the educational work of the house organ the author shows how girls may be taught to wear costumes which

* Editor of *Ourselves*, The Employees' Magazine of The Larkin Company, Buffalo, New York.

will be safe from machinery. "Show girls dressed in suitable costumes, but be sure the models selected are the prettiest girls in the factory."

Evidently the author of "Employees' Magazines" knows the value of spelling correctly the names of employees. He sums up the whole matter of spelling in the passing remark, "A shop-magazine does not exist to annoy an employee."

The book contains numerous practical suggestions such as typical outlines which may be given to employees to aid them in the preparation of manuscripts. A weakness of the book is that it confines itself

too much to publications for industrial plants. Possibly the explanation is that the author's work has been chiefly in this field.

Because the publishers of this book specialize in bibliography, it is hard to understand why the volume does not list other literature on house organs and shop papers.

The selection of a list of good exchanges must of necessity be a personal choice. One cannot therefore quarrel with the author, but one cannot help wondering why some employees' magazines are not listed in the appendix with the "preferred list."

COMMON SENSE IN LABOR MANAGEMENT

By Neil M. Clark. 218 pp. Harper & Brothers

REVIEWED BY FRANK H. RYDER*

Between the covers of this book may be found an admirable synopsis of the problems of industrial management in practically every field. Of course a small volume such as this could not go very deeply into any of these subjects. A volume might well be devoted to each chapter. Especially is this assertion true of those chapters which deal with industrial democracy, industrial unrest, good suggestion systems, and the fallacy of panaceas.

To the efficient industrial manager, the book is a handy reference for frequent review. It calls to his attention numerous problems demanding solution in his own plant. It is a sort of yardstick by which he can test whether satisfactory progress has been made.

For the manager who is not yet awake to modern industrial conditions many of the pages will strike as shrill a note as that coming from the factory whistle. If this note awakens the manager to the necessity of improvement in his plant, a complete perusal of the book will be well worth while.

In discussing hours of work, Mr. Clark says:

* Vice-President and General Manager of the Harder Manufacturing Corporation, Cobleskill, New York.

No problem, except wages, is more commonly a bone of contention between the management and workers than the hours of work. The time a man has to himself away from his job is one of his most precious possessions, *when he is not keenly interested in his work*. And it is, I believe, a more serious indictment against industrial conditions and management methods than is commonly supposed that the debate on this question should be so serious and, commonly, acrimonious. It is unquestioned that certain types of work are so arduous that short hours are essential. And it is not to the interest of the employer or of the employee that the work should be continued beyond a reasonable period. The worker tends to lose his health or resilience, and he has no proper opportunity to participate in social, recreational, and educational activities. The employer, on the other hand, buys the work of a decreasingly efficient man.

The words in *Italics* are those of the author of the book and not those of the writer of this review. It is the inference to be derived from this clause in *Italics* that is startling. Yet I believe it to be absolutely true of the individual workman who is not coerced either by management or by a union and is thus free to work out his individual preferences.

I have often been surprised in glancing

over time-card records. I recall distinctly one man who nearly always comes into the plant half an hour early in the morning to get his glue-pots ready so he can start work immediately when the whistle blows. For doing this he has never been paid extra yet needless to say his pay envelope is the largest in his department because of the bonus system used—the only fair way to pay. In the paint department are two workmen who come twenty minutes early so that they can start their productive work promptly. Of course the majority of workmen do not report until close to whistle time.

Closely associated, as the author points out, with hours of work are the wages paid. In discussing bonus plans, the author asserts:

Bonus plans are variations of the piece-rate plan and the day wage. Sometimes they supplement one plan or the other. They are designed to afford a more imperative stimulus to effort than the simple piece-rate. One favorite plan is to start paying the bonus after a certain standard of output has been reached by the worker. Managers who favor bonus plans usually place great dependence on some particular variety that tickles the mathematical cells in their brains, or with which they are able to produce exceptional results.

A disadvantage of bonuses is that they tend to complicate the wage contract. It may be difficult for the worker to understand just how his wage is figured. It is also easier for errors to creep into the computation. The worker, under any piece-rate or bonus plan, is naturally jealous of getting all that is coming to him, and usually figures up what he is making as he goes along. If his figures fail to correspond with those of the employer, even though the latter may be entirely correct, there is an opportunity for the growth of distrust. That is the last thing that should enter into the relations between the employer and the worker.

There can be no question that the disadvantage of bonuses is that they tend to complicate the wage contract. Nothing will create a wider gulf between manager and man than a payment system which the workers cannot understand and which they cannot figure out themselves. Frankly we had to simplify our system so that the men could figure it out as correctly as the office.

Throughout the book the author holds up a very high practical standard, based, it

seems to me, on the Golden Rule. This standard is summarized by the following quotation from the last chapter:

Whatever is done must be done because it is right, ethically, socially, and commercially.

In illustration of what the efficient industrial manager is not may be found in the following paragraph:

There is little room in the counsels of successful business for the type of manager of whom I heard the other day. Shortly after the war, at a time when it seemed likely that conditions would reverse themselves and there would be more workers than jobs about, he was capable of saying, vindictively, "It's going to be *our* turn for a while, now!"

It must be admitted that the average manager of today has been tried during the past few years to the limit of his endurance. Yet he can ill afford to adopt the policy "It is *our* turn, now."

I have used the phrase "average manager" yet it is very difficult to picture such a man. Every executive of an industrial plant must work in his own way.

This point is well emphasized by Mr. Clark as follows:

The plan must fit the man. One company president eats lunch with his workers. He sits down in the factory restaurant among them wherever he happens to find an unoccupied seat. A man of another temperament might do more harm than good that way. Still another president is frequently to be seen in his shirt-sleeves in the factory departments, consulting, advising, and getting his hands dirty! But some men doing that would merely lay themselves open to derision, because workers would perceive that the action was not natural. Workers do not resent reserve or natural dignity. They do keenly resent any affectation of class distinction or inherent superiority, the kind of bearing that suggests the remark, "He certainly thinks he is *it!*"

The literary critic might possibly say that the book is somewhat scrappy though "snappy" in its style and that its mode of treatment was at times inappropriate. But the business man is not interested in style but demands a clear, straight-forward statement of facts.

One does notice occasionally a slight slip either of the author or of the printer. For example, Edwin F. Gay, who was formerly

Dean of the Harvard Graduate School of Business, is given as Edwin T. Gay on page 106. Such faults are picayune matters and are of interest only to the pedantic critic.

Full of common sense as this book is, it cannot solve all of the problems related to labor. Management *alone* is not responsible for present industrial conditions. Church, schools, and society in general have duties in this matter. Conditions

were quite different when the factory owner could be seen walking to his accustomed place of worship on the Sabbath and when family prayers were an established practice in the homes of the workers. I am not writing a religious tract but a review of a practical book on labor management.

The soul of industrial reform may possibly be the reform of the soul of both the employer and the employee.

THE EDITORIAL

By Leon Nelson Flint. ix, 262 pp. D. Appleton & Co.

REVIEWED BY WILLIAM ALLEN WHITE*

L. N. Flint of the Department of Journalism at the University of Kansas has written this book about "The Editorial." In it he attempts to define and explain the relation of the editorial to the rest of the newspaper.

It is a book that every young reporter and every writer of news for employees' magazines should read. For it tells such writers how to avoid editorializing in the news columns, something that every newspaper man should know. The book is more than well conceived; it is well written, and is understandable, which is the first virtue of a book.

The editorial in a newspaper is about all the boss honestly can get out of it. He has no business tampering with the news columns. They should tell the truth even if the truth turns over his theories. He has no legal right to load up the advertising

columns without reporting his gratuities and adding their value to his gross income and paying income tax upon it. But in the editorial page, he may say what he pleases and make all kinds of a fool of himself, and it's no one's business. Moreover, if he tells the truth in his news columns the subscribers won't care what he says editorially. They will regard his editorials as evidences of his mild insanity, and let it go at that. No subscriber is offended at editorial opinions, if the news is straight.

So the editorial convinces no one; it is not of first-rate importance in a newspaper. It is pleasant to have spritely editorials. They add to the joy of nations. But they are really superfluous, and in the end represent nothing but froth and foam.

It is the news columns of a paper that convince, and they only in the long run when they are square and true and brave.

* Author of "A Certain Rich Man" and Editor of *The Gazette*, Emporia, Kansas.

REVIEWS OF BUSINESS PAMPHLETS

Labor, Capital, the Public, and Management.

By John Lee Mahin, Director of Federal Advertising Agency. New York.

That management—brains at work to control and expand industry—is the co-equal with capital and labor in service rendered to modern society is the thesis of this plea for recognition of the gift of management. Certainly lack of management has been the inescapable difficulty in Russia under Bolshevism. Its leaders had capital left from the old regime—they had labor untold—but they did not have the visioning and planning brain to put them together for successful management of so complex a machine as a modern civilization.

Mr. Mahin says that labor and capital have too large a voice in the current dispute. He wants the public and management to be considered "separate, distinct entities." Furthermore he foresees the only solution of our economic troubles in a management that can appreciate and reconcile the interests of the other three factors. It is a fallacy to think that mere ownership qualifies one to manage—there are hundreds of examples. It has even forced labor to organize and thereby select a management of its own to protect itself. Yet:

Management by labor is unthinkable as management by vote getters. I am willing to make the challenge that there is not a successful co-operative institution where there is not an individual of rare ability and capacity for management who is directly responsible for its success.

But the management of the future will give labor, capital, and the public, each its due. There should be just appreciation of this sort of services:

The men who are conferring the greatest benefits upon the public today are the managers of some of our large corporations. We would have more of such men and we would all have greater benefits from their efforts, if we could develop an intelligent appreciation of what they do, on the part of the general public.

The problem of regulating big corporations is reduced to this rule in the form of a

question: "Does the business increase the average wage, and at the same time decrease the cost of the product in the service it renders to the buyer?" Mr. Mahin argues against the public's going into any business which private capital and management will undertake, but believes:

That the public has the right to, and should, demand that no corporation be permitted to increase profits for capital, and more highly compensated management, and at the same time lower its average wage to the laborers in its employ.

Some valuable ideas on the development of the highest type of management are given. To reach this high stage, Mr. Mahin declares a young man must go through four preliminary stages. First, the bread-winning stage when he realizes that economically he can stand on his own feet. Second, when he finds that his head earns more than his hands, and he uses his own judgment in planning and executing his work. Third, when he plans and supervises the work of others, and is held responsible for the results of his organizing and administrative power rather than what he does himself. The fourth stage is when a man does practically no routine work, but demonstrates his greatest power in getting and holding the co-operation of other big men—men who can't be hired and fired. This gift of securing co-operation can then be applied to building up the co-operative spirit in the owners, workers, and customers of the business they manage.

Mr. Mahin points out that men of this type should not waste their time and energy carrying details that belong to the three preceding stages. He also contradicts conventional ideas by stating that a big manager can change employment without hurt because he enlarges both his experience and his mental attitude, and develops his character by frequent promotions or changes.

The constructive conclusion of this broad and typically modern study of management closes with this appeal for a new kind of management:

It must transcend scientific management, capitalistic management, labor management, and public management.

For want of a better name, I will call it federalized private management . . . whereby we can hope to increase production, stimulate turnover, and thereby economize distribution, reward individual efficiency, most highly, and by eliminating waste, friction, and lost motion, bring about the seeming paradox of maintaining an increasing wage scale, and at the same time lower the cost of living.

Revised Plan for Profit Sharing Dividends for Employees Through Stock Ownership. Procter and Gamble Company. Cincinnati, Ohio.

Employers interested in the present method of profit-sharing at the Procter and Gamble Plants should get this revision of the system that attracted so much attention when inaugurated. It shows by the changes made the difficulties discovered and the new solution attempted.

Profit Sharing Rules for 1920. Simplex Wire and Cable Company. Boston, Mass.

This is a simpler statement of a profit-sharing plan not based on stock purchases. It includes a method of handling claims for sickness and injury, death benefits, and for "lay-offs." There is also an interesting page on the election and organization of the factory committee. It may be noted that the office has only one representative out of fifteen while a manufacturing group has as many as four.

The A. B. C. of the Trade Acceptance. By Dr. J. T. Holdsworth, Vice-President, The Bank of Pittsburgh, Pittsburgh, Pa.

Elements of Trade Acceptance Practice. By Robert H. Bean. American Acceptance Council, 111 Broadway, New York, N. Y.

These two brief pamphlets contain the gist of the arguments for trade acceptances very clearly put by two of the leading advocates of the extension of this credit practice. They are frankly propagandists. Mr. Bean states the mission of the trade acceptance thus:—

It is to liquefy credit, improve the turnover and minimize credit losses. To maintain its place as a high grade credit instrument, it will therefore be used with the best class of current accounts. Where goods have previously been sold on an

open account basis and the credit department record of the customer shows that his account is usually settled with due regard to the credit terms, the acceptance is used to the best advantage.

Mr. Bean seems to admit what opponents of the acceptance have held that it is most useful for accounts of least doubt which are being handled satisfactorily without the use of acceptances. He also admits there will be the usual abuses from which all credit machinery suffers.

To state that the trade acceptance is not subject to abuse would be as untrue as to make the same claim for a promissory note, check, or any other kind of instrument in which the elements of credit are involved. When correctly drawn and used in strict accordance with the terms of the Federal Reserve Act and good business practice, the trade acceptance represents the best form of liquid merchant's paper and enjoys the highest per cent of payments at maturity.

He thus warns against carelessness in crediting:

Each trade acceptance should represent a carefully investigated credit account. No diminution of care in the selection of credit risks should be permitted because trade acceptances are used. On the contrary there should be closer investigation so that every trade acceptance shall represent the best of credit risks.

Mr. Bean believes that trade acceptance practice should not be insisted upon until the users thoroughly understand its principles. "It needs explanation rather than defence . . . and wins its way when inaugurated under proper auspices."

Dr. Holdsworth's statement will help this process of explanation. After discussing the form and purpose of the acceptance, he declares that it does not in any sense antagonize cash discounts:

Hundreds of business concerns which have abandoned the open account method offer two methods of settlement: cash within 5 or 10 days, or, as the only alternative, the signing and prompt return of a trade acceptance maturing in 30, 60 or 90 days. . . . By converting these slow indeterminate book accounts into liquid, double-name commercial paper, Trade Acceptances, which discounted at full face value automatically provide the funds necessary to finance each account, the necessity for borrowing decreases proportionately, the large margin between quick assets and liabilities is reduced, and

often lower discount rates are possible with correspondingly lower prices to the buyer.

He closes his discussion with lists of the advantages to the buyer, the seller, and the banker and public. The buyer (1) improves his credit standing; (2) becomes a preferred customer practically on the same plane as a cash buyer; (3) can show "acceptances payable" instead of "accounts payable" to his banker or a creditor showing his ability to meet his obligations; (4) will become a more careful buyer; (5) will learn the habit of prompt payment and so business will be quickened all round. The advantages to the banker include (1) gaining the most desirable asset a bank can hold—double-name paper on current transactions; (2) a most serviceable additional "reserve" as this 90-day paper is readily discountable at the Federal Banks; (3) through Acceptances he gains valuable data on the seller's customer's and trade; (4) that Trade Acceptances may be discounted without the 10 per cent of the capital limitation to any single borrower on direct loans.

Service of a Business Library. By Alice L. Rose, Librarian of the National City Bank, New York, N. Y.

Work of the Detroit Edison Company's Library. By Maude A. Carabin, Librarian, Detroit, Mich.

The value and importance of the modern efficient commercial library needs no better proof than Miss Rose's statement that the library of the National City Bank which required only four assistants in 1914 is now scarcely handled by a staff of thirty-two. She quotes "Boston's Special Libraries" by Ralph Power (1917) to show that Boston alone had then sixty-six different special libraries. She adds:

I am informed by the Secretary of the Special Libraries Association that the number of special libraries in the United States now reaches nearly 400. . . . The library of industrial chemistry of Arthur D. Little of Boston, supplies each of the specialists in the different fields of chemistry with the latest information. . . . The Public Service Corporation Library of New Jersey furnishes material dealing with rate cases, franchises, depreciations, and the valuation of public utility properties.

The National City Bank Library is thus described:

In our corporation files we have material on about ninety thousand corporations, domestic and foreign—they contain . . . indentures, balance sheets, circulars, listing statements and newspaper clippings. We have an index of all the companies mentioned in the Commercial and Financial Chronicle since 1910. . . .

We have a card index of about twenty-four trays containing references to magazine articles on various commodities and articles of interest about all countries of the world, their economic condition, finances, natural resources, transportation, and anything else. We have a catalog of about sixty trays in which books and pamphlets are indexed under author, subject, and sometimes title . . . we go through a book carefully, page by page to see if there is anywhere concealed even a short paragraph on some subject on which we have no material . . . which sometime in the future may prove to be of use.

The business librarian seems to set herself one ideal—never to get caught without some information on any point that may affect the business either in large or in particular. Miss Rose says: "She feels her work has been, to some extent a failure if she cannot produce at least a little information on any subject about which she is asked."

Miss Carabin puts it thus:

He should sweep the field of progress for precedents, indexes, guides, and dangers, that he may relay to the business man inaugurating and recommending innovations in business . . . its tendency is more and more to act as a positive informing agent. It is patently the duty of the library to reveal buried data to departments or individuals interested.

Miss Carabin's description of the filing system for plans, blue-prints, etc. is especially interesting, as is the method of centralizing the records and material of an organization where the departments are widely separated as in the Edison company. She also notes the two classes of initiators who need the library: those at the top who come with complete ideas and programs to get data, specific fact, and fill in their outline; and second those who come up from the works with vague "hunches" and who need an agent who can step in and help to think the proposal out, and organize and give direction to these nascent

constructive powers which exist everywhere in business.

One more good paragraph should be noted:

Any member of a business organization should rightly expect to consult his library with the consciousness that all preliminary explanation . . . can be waived and that he may proceed at once to his investigation with the conviction that it has been somewhat anticipated, and that the existent, adaptable data, have been weighed, their availability measured, and that as a result of judicious culling he will be spared the annoyance of working through an irrelevant, worthless mass of material.

Miss Rose closes with two practical don'ts. (1) Don't ask vague questions, saying you want everything the library has on a certain subject, but make the request specific. (2) Don't merely ask for a certain book in which data can be found. Tell the librarian the information you want. If the book is not available, she can usually get the same facts somewhere else, for:

The service of a business library is to collect intelligently information of every nature, to bring it to the attention of men too busy to discover it for themselves, and so to arrange it that it may be instantly available.

The Industrial Survey in Relation to Your Business. The Bank of America. New York. Series I, No. 4 of "What a Bank Can Do for You."

The industrial survey as part of the service which a bank by its nature and experience can render its customers effectively is here distinguished from an audit or appraisal.

An audit is an examination of figures which shows what has happened. An appraisal is an independent valuation of the fixed assets of a business. An industrial survey, however, is a comprehensive picture of the going and current operations in a plant. In this chart are shown all the operations occurring at all times. . . . It covers everything from the construction and equipment to its possibilities of expansion, its excess capacity, if any, and steps which may be taken to utilize such excess capacity. . . . It is not to be regarded as an infallible cure-all, but rather as an antidote, a preventive and at the same time a healthy stimulant.

This booklet points out how rarely a crowded executive can drop all unfinished

business "to study and analyze with undivided concentration, the fundamental principles, social problems, and mechanical details affecting and frequently controlling his plant." He needs, therefore, a staff of industrial experts to make investigations and devise systems of betterment.

The normal results of such surveys are given thus:

1. Reduction in manufacturing costs.
2. A better handling of the labor situation.
3. Better and more comprehensive reports for executives.
4. A complete picture of the plant in all its phases.
5. Accurate and careful criticism and suggestion as to the improvement and operation of the cost system.

From the records prepared by the investigator, a chart can be maintained which will show at all times:

1. The cost of merchandise produced in a given period with a certain number of operatives and machines.
 2. The class, character, and pay of the operatives which produced the merchandise.
 3. The decreasing value or obsolescence of the mechanical equipment.
 4. The method of distribution, price setting and competition.
- The following chart is given of the steps in an industrial survey by this bank:

1. Plant and Equipment
 - (a) Buildings
 - Type
 - Physical condition
 - (b) Equipment
 - Mechanical condition
 - Present utility
2. Executives
 - (a) Duties
 - (b) Experience
 - (c) Ability
3. Products and By-products
 - (a) Stock quantities
 - (b) Specification
 - (c) Seasonableness
4. Raw Materials
 - (a) Semi-finished
 - (b) Finished
 - (c) Where and how furnished
 - (d) Condition of stock

- (e) Method of checking
- (f) Quantities normally carried
- 5. Departments
 - (a) How laid out as to sequence of operation
 - (b) Operations and equipment of departments
 - (c) Method of handling work in process
- 6. Labor
 - (a) Number and sex of employees
 - (b) Labor turnover
 - (c) Method of time of payment
 - (d) Bonus and premium
 - (e) Labor troubles, past and present
 - (f) Welfare work
 - (g) Attention given to employment of labor
- 7. Handling Material
 - (a) Railroad facilities
 - (b) Shipping facilities
- 8. Production
 - (a) Expenses
 - (b) Finances
 - (c) Sales
 - (d) Overcoming periods of operation
- 9. Costs
 - (a) Are accurate results obtained?
 - (b) Checked against estimates?
 - (c) Are cost figures available promptly so as to permit action to be taken for reduction?
 - (d) How often are books closed?
- 10. Engineering
 - (a) Is power generated or purchased?
 - (b) Condition of power plant
 - (c) Assurance of continuity of power
- 11. Distribution
 - (a) Method of price setting
 - (b) Selling policies
 - (c) Terms of sale
 - (d) Competition
 - (e) Territory restriction
 - (f) Chief customers
 - (g) Foreign business
 - (h) Domestic business
- 12. Operating Reports
 - (a) Nature
 - (b) Comprehensiveness
- 13. Expansion
 - (a) Possibilities
- 14. Excess Capacity
 - (a) Steps taken to fill in.

The bank, it is held, can offer this serv-

ice effectively because its knowledge of industrial conditions, systems, and experiments daily becomes wider; it is a clearing-house not only for funds but also for ideas. It can give this service reasonably since it does not depend upon it for a profit. This service will add efficiency and protection to the services of the credit department; it enables a bank to offer exceptional facilities as executor of estates the assets of which include a going business to be liquidated or continued, or in the underwriting of securities and the preliminaries thereto. This department serves definitely and comprehensively the needs of corporations considering the acquisition of new properties or the extension of operations towards the manufacture of allied lines.

The object of the bank in offering this industrial service is stated to be: "to stabilize the finances and also to increase the output of American manufacturers . . . which will benefit the bank as well as its customers."

How I Get Along With People. By D. W. Griffith. Gratis from *Hearst's Magazine*, New York, N. Y.

This reprint contains two good ideas from an executive whose chief duty is to have imagination enough to get along with people—and in two supremely difficult relations: as the director of temperamental actors, and as purveyor of amusement to the well-known fickle public:

Know every side of your man before you approach him with an offer; know all you can about him before you try to sell him something or before you ask him for a job. Make as much preparation to meet a man with whom you are to deal as an author does to collect material for a story. For every man you meet is a story, long or short, in your life.

On the difficult matter of self-appraisal Mr. Griffith whispers wisdom:

Don't brag; but, on the other hand, don't mark yourself down. The world accepts us at our own estimate unless we too loudly proclaim it. If we proclaim it too loudly we revolt persons of balance and good judgment. Tell quietly what you have done and what you think you can do and ask the chance to prove that you can do it. The note of quiet confidence gets a general response.

CHRONICLE AND COMMENT

CUTTING DELIVERY COSTS

The cost of making package deliveries in New York City has become so excessive that methods for reducing this expense are under serious consideration. The use of the Government Parcel Post Service for this purpose is under investigation. Such a plan is now in use by St. Paul merchants who claim that they will save \$37,500 annually as a result. The cost of delivering an average package has been reduced from about 12¢ to slightly more than 6¢.

BETTER BUSINESS BUREAU

A representative group of merchants and bankers in Philadelphia has organized a Better Business Bureau. Its principal object is the promotion of honesty, truthfulness, and dependability in advertising and merchandising, and the correction of wrong practices.

A recent statement by the Secretary, Elwood W. Russel says:

We are hoping that the influence of this bureau will become so great that it will be to the conduct of business what a police force is to the city.

We play no favorites and in proof of this I may cite the instance of an investigation into an untruthful advertisement published by a department store owned by one of our members, with the result that a promise was given to exercise great care in the future in the matter of accuracy in their advertising.

The newspapers are co-operating with us in our efforts for it is really to their interest to do so. Readers naturally become prejudiced against the papers printing advertising of which they have become the victims or which they feel are exploiting dishonest schemes.

Mr. John H. Mason, the president of the Commercial Trust Company, is also president of the Bureau. He recently stated that \$250,000,000 of worthless securities are annually sold to the American people.

UNIFORM ORDER BLANK

At a recent meeting of the Board of Directors of The Associated Dress Indus-

tries of America, a committee was appointed to meet with a similar committee of piece goods wholesalers representing the Silk Association of America and another committee of waist manufacturers representing The United Waist League of America, for the purpose of drawing up a uniform order blank for dealings between ready-to-wear manufacturers and piece-goods wholesalers.

This is in line with the policies recently adopted at a convention of The Associated Dress Industries at Atlantic City at which a stand was taken concerning uniform terms, overproduction, cancellations, and discounts throughout the trade as a whole.

EXPORT SALES ORGANIZATION

In the field of foreign selling a recent pronouncement from the Greenfield Tap and Die Corporation of Greenfield, Mass., classifies the methods in use under four heads as follows:

1. Commission and export merchants
2. Manufacturers' agents
3. Foreign representatives
4. Direct selling by mail or by firms' own salesmen

Any firm doing business abroad will not usually confine itself to any one of these heads.

The same statement mentions other points of interest from the standpoint of the organization of the export sales office and also from that of foreign correspondence. In connection with the location of the export office, two factors must be considered, namely, its nearness to the manufacturing plant and its closeness to the seaport. In the one case, easy and direct control of the customers' interests and general knowledge of production from day to day are secured. In the other case, direct contact with shipping information, issuers of marine insurance, and intimate connections with the offices of commission merchants and large exporters can be had. This Company has solved its problem by establishing its export sales division at the factory, while taking care of its port interests in New York by

the location there of a direct export representative.

The company's experience with customers abroad, brings to light that one of the greatest sources of annoyance to people in other countries is the receipt of under-paid mail. Its statement of the problem and its own manner of solving it are as follows:

One does not like to pay double the amount due (a system largely used in several countries) to get a circular of no interest. This is equally true of real letters. To guard against *domestic* postage being applied, in the mail room square envelopes are used for the bulk of the oversea mail. These at once attract attention and are carefully stamped correctly. The export stationery shows our various plans, lists different brand names and trade marks, gives our international cable address and the list of cable codes we use, shows the addresses of our foreign branches, names the divisions of our plants and lists by name our products. Each letterhead is itself a dignified advertisement.

FOREIGN SALES ORDERS

The Greenfield Tap and Die Corporation of Greenfield, Mass., has also recently published its method of foreign orders routine.

After the preliminary correspondence concerning product has been handled and the order for a particular product is received and acknowledged, it is sent to the Credit Department for rating and acceptance of the proposed method of payment. It is then routed to the Export Division where it is entered in the Order Register on a page reserved for a particular customer, the customer's order number being used. Next an instruction sheet is prepared which will later be attached to the shipping copy, and is a complete list of directions for all departments who have anything to do with the order. Directions as to method of forwarding, routing, payment, insurance, numbers and kinds of documents required, shipping marks, shipping schedule, parties to be notified, etc., are clearly stated and serve to insure proper handling of the entire shipment.

While the Instruction Sheet is prepared the order is being edited, that is, the items are rewritten exactly as specified in our catalog, correct numbers given, exact specifications as to thread form and dimensions noted, etc. The correctly edited order with instruction sheet attached is then sent to the Order Department where we assign it our own number by which it will thereafter be known. Then it goes to the Order Copying Department after being

marked as "Issued" on the Export Order Register above mentioned.

In the Copying Department the edited order is copied on to our own order forms of which there are six copies—Master, Shipping, Current Binder, Packing List, Acknowledgment and Statistical Copy. After copying, the copies are checked for error against the original and the Master Copy sent to the Billing Room where it is filed as an invoice copy until the shipment is invoiced. The Statistical Copy is sent to the Statistical Department for crediting to the proper items, territories, etc. The other copies with the original are sent to the Stock Maintenance Department to enable the material ordered to be checked off the perpetual inventory, and for promises to be secured for any items out of stock.

From here the Original Order, Acknowledgment and Current Binder copy (the latter checked for stock goods, and with promises against short items) are sent to the Export Division. The order is checked with the Export Register to show what our number for the order is, then filed in the promise file and the formal acknowledgment sent to the customer, giving him probable date of shipment, etc.

If all the items are in stock the Inland Bill of Lading, the Shipping Copy (with instruction sheet attached) and Packing List go to the Central Stock Room where the items are collected, double checked and sent to the packing and shipping departments. When complete shipping has been made (the packing list having been included in one of the cases) the shipping copy is marked with the case numbers, weights, etc., and sent to the Billing Room. There the required number of invoices are made out, together with a letter of instruction for the forwarding agent to whom is sent the necessary invoices, the letter of instruction and the inland bill of lading. The balance of the required documents go to the Financial Department, where one invoice copy is detached and used to debit the customer's account, after which it is sent to the Statistical Division.

The Financial Department makes up the proper drafts, if required, or acceptances, and a banker's letter of instruction, and certify through our invoices and other documents. These now go forward either through our Bank or to the Customer as required, with the ocean bill of lading which has meanwhile been received.

The customer receives his goods from the steamer on which our forwarding agent has placed them, by presenting the ocean bill of lading. This document he has (in case of documentary shipments) secured from his bank by paying the amount of our draft, thus completing the cycle of an Export Indent's journey.

Of course the above is typical of the most simple transactions only. Where special goods are ordered, or where many part shipments must be made the above routine is complicated by many things. It requires most painstaking accuracy on the part of every one connected with an Export Order's routine to insure a quick, clean delivery of tools in perfect condition—thereby securing a satisfied customer who will re-order from us gladly.

PLANT CENSUS

The taking of a physical inventory of its plant personnel is a periodic feature of the human side of the Mead Pulp and Paper Company of Chillicothe, Ohio.

This physical inventory or plant census is for the purpose of compiling a record of the mill employees. The management desires an accurate record of what each employee is doing, how long he has been with the company, what previous experience he has had which might be of value here, and what his attitude is concerning his work.

A record card on which this census is taken makes provision for all of these items. The education which the employee has had or is now securing is another fact of importance recorded. This service record is kept on file and whenever questions as to promotions, Christmas bonus, vacations and the like come up the record stands in the place of the employee. It is the purpose of the personnel office to keep these records right up to date. The record is held as a strictly private matter between the management and the employee and access to the record for the making of change or the adding of supplementary data is allowed.

MILL COUNCIL

The Mead Pulp and Paper Company of Chillicothe, Ohio, has a mill council which is alive to the service which it can render its fellow employees.

During the past period of high prices it has been able to secure by large quantity purchases various articles of clothing which it has been able to sell to employees of the plant at a price much lower than has been charged by the local retail dealers.

It is considering the advisability of establishing a co-operative store. It also has under consideration the fitting up of a club room pending the time when the Company shall carry out its plans for the erection of a modern club house with recreation rooms, rest rooms, pool tables, and all appliances necessary for a modern club house.

The securing of proper kinds of food in the Company restaurant and the betterment of restaurant service have recently claimed the attention of the council.

EDUCATIONAL CONFERENCE

At a recent conference held under the auspices of the Monroe Calculating Machine Company at Hotel Monmouth, Spring Lake, New Jersey by the sea, the problem of better educating the sales force intelligently to assist users and prospective users of the Monroe, received careful consideration.

The conference resolved itself into a school in which real instruction was given by Monroe salesmen who are specially equipped in different lines of business. The various ways in which the Monroe can be fitted into the accounting and statistical systems of different lines of activity was, of course, the point of emphasis.

A good many manufacturers of various kinds of office appliances and devices are finding, just as have accountants, that ready-made systems can not be put into a business with the expectation that they will operate themselves. If a user of an office appliance can be shown how to get the most effective use of the appliance a body of satisfied customers will be built up which will make the good will of the Company its most available asset.

At this conference the subjects covered were banking, textiles, iron and steel, railroads, department stores, engineers and contractors, schools and colleges, governmental offices, lumber, paper, rubber, coal, leather, oil, dairies, Monroe methods, modern office routine, machine service, advertising and systems service work. The last four subjects were courses required of all salesmen; the others were elective.

The sales conference school has become a fixed part of the Monroe Sales Organization.

PRIZES FOR SAVERS

The L. Bamberger and Company Organization operating the largest department store in Newark, New Jersey, has had under operation a prize system in its delivery department which seems to be bearing good fruit. Its merits system which is in operation through the other departments of the store has been extended to the delivery department. In addition to this certain prizes are offered each month to drivers and helpers who deliver their packages at the lowest cost per package.

Before the installation of the prize system certain differing conditions throughout the delivery system had to be taken into account. To make the competing fair, in determining the cost of each route, the delivery force was grouped in accordance to the type of car used. Only those items of actual operating expense for which the driver might be held responsible were considered. The prize money is divided between the driver and his helper in proportion to their weekly salaries.

SALES MEETING

Sales Departmental Meetings are held periodically by the sales force of L. Bamberger and Company department store, Newark, New Jersey, for the discussion of subjects of interest to the department and for the promotion of departmental loyalty. How to show new merchandise, what to say about it, policies peculiar to the department, coming events of interest, store plans in which the employees can help, are some of the topics brought up for discussion. It is planned to place a brief of the departmental discussions in the hands of the department employees.

NEW PLANNING

A planning department has recently been made a part of the organization of the Davol Rubber Company, Providence, Rhode Island.

The aim of the department is to guide

production in a progressive and intelligent manner for the purpose of eliminating the wasting of time and material and for the simplification of operations. This will be accomplished by the issuing of clear cut directions to aid the employee in his work.

A proper record will be kept of the efforts of the various departments for the purpose of distributing the work in such a way that there will be no loss of time from waiting and also for the purpose of reducing the percentage of spoilage.

It is expected that the new department will insure the correction of relative underproduction in those lines which are too far behind the others, by distributing the load of pressure due to heavy orders through the apportionment of sufficient labor and attention to such lines. A flying squadron of employees has been organized for this purpose. The standardization of an equitable wage scale for every job is another function of the planning department.

LIBRARY COSTS

E. F. Houghton and Company of Philadelphia, manufacturers of lubricating oils, maintain a plant library as a vital part of its organization.

In a recent statement to employees, the following is worthy of note:

Our library costs considerable money to maintain. These costs continue whether each employee uses the library or not. When an employee does not use the library, the cost so far as he is concerned is wasted.

The library receives periodicals, trade catalogs, books and pamphlets, marking whatever items there are of interest to various executives and employees, and routing these periodicals and pamphlets so that in due course, each executive and employee has called to his attention these items of interest.

Some interesting figures have been made as to the use made of the library. Throughout the entire plant 33% of all employees are making use of the library. In the sales department 21% of the entire sales force is using the library. 90% of the office force makes use of the library. The time spent by the library in rendering assistance to various departments is also of interest.

50% of the library force's time is used for the advertising department, 25% for selecting and gathering trade catalogs for the works engineering department, 10% for the leather department, 10% for the general office, and 5% for the oil department.

CONTRACT-CANCELLATIONS

The disturbance to wholesale trade brought about by the large number of cancellations of orders which has been experienced during the past few months is receiving serious attention in every large city.

Charles L. Bernheimer, President of the Bear Mills Manufacturing Company, and during the past eleven years Chairman of the Committee on Arbitration of the Chamber of Commerce of the State of New York, has recently made some valuable suggestions looking towards the correction of the evil.

His first suggestion is "that manufacturers and wholesalers who do business in this state should obtain and read the pamphlet prepared and issued jointly by the New York State Chamber of Commerce and the New York State Bar Association." This pamphlet deals in a comprehensive way with the whole question of commercial arbitration and its possibilities under the Walton Act.

His second suggestion is that "all merchants return to the old-fashioned method of trading, adopting again the rule about watching out with whom they trade, and how, when and where. Careful inquiry as to the character, financial strength and ability of those with whom business was done was formerly considered an essential prerequisite of trading. Like many other natural and desirable business cautions, this rule has been relaxed during the last few years."

At the same time he insists that there is no question but that greater care must be taken in the preparation and exchange of everyday business contracts, with a view to making them as nearly uniform in each trade as possible. The business done under standardized contracts, such as bills of lading, bills of exchange, insurance

policies, etc., produces a very small amount of controversy compared to the large amounts involved.

Finally, he suggested that "no business contract, at least in the State of New York, be executed without an arbitration clause, which should be carefully drawn, with legal advice, and adapted to the specific requirements of the case. The contract should provide that the arbitration take place under the auspices of some commercial body having the necessary facilities and rules governing procedure. Under the Walton Act in this State a clause in a contract containing an agreement to arbitrate a future difference is as valid, binding and irrevocable as any other feature of the contract. The act does not make arbitration compulsory, but after an agreement to arbitrate any future differences has been made it cannot be disregarded, as in the past."

A number of queries have come to him of late, as Chairman of the Committee on Arbitration, as to the proper wording of an arbitration clause. The following tentative clause has been drawn up, but he suggested that no firm use it without first consulting their attorney regarding its effectiveness in the particular case concerned:

Any dispute arising under, out of or in connection with, or in relation to, this contract shall be submitted to arbitration under the rules for the time being of the Committee on Arbitration of the Chamber of Commerce of the State of New York.

GARMENT MANUFACTURERS

The International Association of Garment Manufacturers at its semi-annual convention at the Waldorf Astoria Hotel, December 8 to 10, has had under consideration, among other important matters, the establishment of a uniform cost accounting system for the entire trade. It has planned to spend more than \$150,000 during the progress of the work, which will include the compilation of a cost accounting manual.

The firm of Miller, Franklin, Basset and Company, Industrial Engineers is in charge of the work.

EMPLOYMENT BUREAU

In a chatty, informal way, the growth of the employment bureau of the Bausch & Lomb Optical Co. is outlined in *The Reflector*, published by and for the company and its employees. The rapid growth of the personnel of the firm made the obsolete employment method inadequate. The evolution of the employment bureau is outlined as follows:

In the old days there was no "employment bureau" as we understand the term today, and our folks were engaged by one of the members of the company, a superintendent or a foreman. Each of these people had other work to do and their activities in the employment field were casual and of an unsystematic nature. As the plant grew, however, more employees were necessary, which made the employment question a little more involved.

At first the employment work was done by the man who could do it without interrupting his other duties. But all the while the plant continued to grow. This situation became so acute just prior to America's entry into the war, it became apparent that a separate office would have to be used.

And so in 1918 the present employment bureau was created and the next year became a branch of the Industrial Relations Department. The director has talked in the last year to 16,000 applicants for jobs. Each one is required to fill out a regular application which is filed for future reference.

In introducing the new department to the employees in the plant the employment department issued the following:

All applicants for positions in the plant will be courteously received and interviewed at the Bureau. Employees who have lost their photo factory passes should apply to the Bureau for new or temporary passes before they ring out.

SAVING WASTE

The Log of Long-Bell, the publication of The Long-Bell Lumber Company, publishes a unique article by the Chief Engineer Miller on "A Piece of Cotton Waste." Cotton waste, both white and colored, can be used for wiping off machinery or in packing for truck boxes, etc. The waste

of waste comes in by throwing the cotton-variety away after it has been used once, say, to wipe one's oily hands with.

On this point Mr. Miller says:

I have seen more than one take a clean piece of waste, wipe their hands once then throw it down wherever they happen to be. Someone else has to pick it up, generally the clean-up man, as no one will notice it lying around. It eventually finds its way to the burner or trash pile and is burnt up.

Oily waste is a great fire hazard, as it easily takes fire through spontaneous combustion, and numerous fires are started in this way.

In the power department of The Long-Bell Company, waste is saved and used again. Cans, placed at convenient places in the factory, collect the oily waste. When full, these cans are emptied in the engine room. The waste material is boiled for about two hours and then run through an ordinary clothes wringer while the waste is still hot.

The result of this process follows:

We get, usually, ten gallons of oil at each cleaning. This is allowed to settle. We then draw off about eight gallons of good oil. This oil is worth forty cents a gallon, and the washed cotton waste will wipe machinery better and cleaner than a new piece of waste.

STARTING SAVINGS

We have just received another supply of bank books from the Guaranty State Savings & Loan Co.

This notice is printed in *The Center Punch*, the yellow booklet published by The American Multigraph Co. for distribution among the employees. By the plan adopted every employee who starts a savings account with four dollars is given an additional dollar at the end of six months, plus interest on the full amount. Deposits added to the original four dollars during the period draw interest at the end of the six months period.

In this way The American Multigraph Co. encourages thrift and economy on the part of its employees. Two experts are in the cashier's department at all times to consult with, and advise, prospective depositors.

ADMINISTRATION

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A CROSS SECTION OF INDUSTRIAL CONTROL

BY JOHN R. COMMONS*

IN search of successful experiments in labor management, the writer and a group of students visited, about a year ago, thirty or more business establishments. The search extended from Wisconsin to Maine. Each establishment possessed only an experimental policy, and each was searching elsewhere for some new experiment. Nothing, in the field of labor, was finally settled; everything, from day to day, was undergoing resettlement. Naturally, we distinguished personality from system, but found even that distinction treacherous. Gradually, however, certain establishments began to stand out as distinctive. Each had something that was unique; sometimes the system of organization; sometimes a dominating personality that seemed to override the system.

We tried throughout to find something on which to hang the facts in each business concern. One of the concerns, Hart, Schaffner, and Marx, of Chicago, stood out as representing a struggle for power between organized capital and organized labor; another, Filene's, of Boston, represented just plain health and happiness for its

workers; Ford's policy was faith in people of all sorts and conditions; that of the Wayne Knitting Mills was faith in the management; that of the White Motor Co. was getting employees to think about the future of the business; that of the Packard Piano Co., of Fort Wayne, was co-operative speeding-up; Joseph and Feiss, of Cleveland, represented minute measurement of human motives in terms of money; the Dennison Manufacturing Company stood for emancipation from absentee owners, and government by the imaginative minds active in the business. All were trying to sell efficiency to democracy. We did not come across any scheme of profit-sharing, in the usual sense of that term.

All of these companies, of course, had features in common, but these ruling ideas stood out rather clearly as we neared the end of our journey when we could look back and compare them one with another.

All of them were very alive and were making great changes in short periods, both in system and personality. The Nunn, Bush, and Weldon Company, of Milwaukee, was passing from autocracy into government by employees; the Plimpton Press from

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scientific management into unionism; the Milwaukee Street Railway Company from welfare work into self-government; the Printz-Biederman Company, clothing manufacturers of Cleveland, from a political to an industrial form of government.

One interesting fact was found: the sudden or gradual moral conversion of an employer from the point of view of pure business to the point of view of humanity. Employees noted it, and could not at first believe it, or were still incredulous, and told us about it, and so did the employer himself. In some cases it was unionism or strikes that did it. In others it was business foresight into the labor problem. In others it was sermons by an industrial evangelist.

We noted also certain obvious contrasts. In one case output had fallen off two-thirds, wages had doubled and prices took care of both. In others efficiency had increased nearly as much as wages, so that the increased cost of living was nearly paid for by increased output per man. In some cases wages had not kept up with the cost of living; in others they had far exceeded the increased cost. In some cases labor turnover was down at astonishingly low figures compared with the industrial world in general. In some cases seasonal industries had been stabilized so that no employee was laid off. In others a reserve army was depended on for elasticity. In others the rapid growth of the business had overcome instability of employment.

We learned not to say "Industrial Democracy." We say "Industrial Government." We find widely different things done in the name of Democracy. The main thing is that they are being done by very vigorous men and women, who are going after things, and are making things buzz. Every one of them is a live idea getting

itself into action. Forms of government are adapting themselves to ideas and conditions.

Yet we were not under illusions. We looked up experts in industrial government. It is astonishing what easy marks for experts many employers had become in the summer of 1919. From all sides and several vocations these experts were coming in and setting themselves up. They got long-distance calls from employers to hurry up and come at once. They lifted the employers' pocket-books at will. One would think that the capitalistic system was crumbling, in that employers had lost the power of discipline. In some cases we found that they had actually abdicated and turned the labor end of their business over to professors. Just what it all portended was a puzzle. Certainly the temporary scarcity of labor was a leading fact, and employers began to regain their independence and reduce wages in 1920.

II

We do not convince ourselves that the establishments which we visited were typical of industry as a whole. They seem, indeed, with one or two exceptions, to have reached success for the present and to have reached it along new lines. One of these employers said that 25%, another that not more than 10%, would be a liberal estimate of the proportion of employers in general who were alive to the modern labor situation and were meeting it in the new way in which they themselves were trying to meet it.

Our conclusion, therefore, is statistical. From 10% to 25% of American employers may be said to be so far ahead of the game that trade unions cannot reach them. Conditions are better, wages are better, security is better, than unions can actually deliver

to their members. The other 75% to 90% are backward, either on account of inefficiency, competition, or greed, and only the big stick of unionism or legislation can bring them up to the level of the 10% to 25%.

We see the process of competition between employees and unions to produce benefits for the workers going on continuously, and can compare the results over a period of time. Thirty years ago two great industries, the steel industry and the newspaper industry, were working eleven to twelve hours daily, seven days a week. In the steel industry unionism was defeated at the Homestead strike of 1892. In the printing industry a strong organization grew up, based on the "closed shop." Now, after thirty years, the steel corporation, with its "open shop" banner, works a large part of its employees eleven to twelve hours a day, seven days a week, but the printing industry with its "closed shop" works them only forty-four to forty-eight hours a week. In the steel industry wages go up and down like the prices of commodities determined by the import and export of labor. In the printing industry wages are "standardized and stabilized" according to humane principles, and the printer earns more money (in terms of purchasing power) for eight hours than he earned for twelve hours work.

In both industries revolutionary improvements in processes of manufacture have been introduced, displacing the laborers or enlarging their product. In the steel industry the results of those improvements go only into profits for the owners and reduced prices for the consumers. In the printing industry the improvements have made newspapers cheaper and larger for consumers, have increased the profits of the owners, and have shortened hours and raised wages. In the

one industry only the owners and the public participate in the progress of the nation. In the other the owners, the public and the wage-earners participate.

With such a contrast, it cannot candidly be said that in the printing industry the "closed shop," with its restrictive policies, has been disadvantageous to the nation, and that in the steel industry, the "open shop," with its unfettered policies, has been advantageous to the nation as a whole. The steel corporation has kept ahead of the game, not by doing better than the unions can do, but by doing worse, and doing it under the name of liberty and the open shop. We did not make a point of investigating, in this trip of ours, establishments that keep out the unions by doing worse than the unions, but those that do better than the unions. The open shop may be either a cloak to hide long hours, competitive wages, and voiceless workers, or it may be the means of securing freedom for the management in furnishing reasonable hours and fair wages for manly workers. We tried to find the latter and to find out how they do it.

No one can squarely defend all of the restrictive policies of unions, but if they are carefully examined, as we tried to do, they will be found to be not so very different from the restrictive policies of employers and of non-unionists. In all cases these policies have their source in the knowledge that there is not, at all times, enough work to go around, which is but saying there are not, at all times, enough markets to take all of the work and product at fair wages and profitable prices.

In the summer of 1919 almost every establishment in the country was bending its energies to get the workers to be more efficient and to get out more product. In less than a year they

began laying off the same workers because they were getting out too much product. The workers were restricting output in 1919 in order to make more wages—then the employers were restricting the output in 1920 in order to keep up prices. In one case it seemed to be unjust, in the other it was good business. It would seem that what is needed by both is stabilization and standardization.

III

We do not find that "labor" wants to participate in the financial responsibilities of ownership. At one extreme we found an organization of labor in the clothing industry, strongly socialistic, which has put off its ideal indefinitely into the future because its thousands of inexperienced members know that they are not ready. At another extreme we found the organizations in the printing industry composed of the most intelligent workers in modern industry, some of whom have been employers and failed, and they want somebody else to take the responsibility. Even the employers' shop unions, which we found, in two or three cases, had gradually taken over a very large participation in shop management, draw the line distinctly at the point of financial responsibility.

In fact, the whole history of labor organization shows that "labor," as such, cannot manage industry. The older unionists have learned by experience. They have seen it break down and seen it succeed, and in either case, labor as such has lost out. For when their co-operatives succeeded, the members closed their doors to new members and began to hire wage-earners on the market, like other capitalists, and eventually went over to the employers' side of the game. If they failed, labor of course lost out.

If they succeeded, they knew a good thing too well to let in anybody that came along. Labor, as such, is made up of young laborers and new laborers continually coming in, without experience or discipline. It is even immoral to hold out to this miscellaneous labor, as a class, the hope that it can ever manage industry. Labor, as such, in control of industry breaks down on discipline, on credit, on depreciation accounts, on planning for the future, on finding managers who can shoulder responsibility. But if it seems to succeed on these points, it is because certain *individuals* succeed, and then those individuals immediately close the doors, and labor, as a class, remains where it was.

What we find that labor wants, as a class, is wages, hours, and security, without financial responsibility, but with power enough to command respect. This is seen at several points. Security in a good job is the very heart of the arbitration plan which we found at Hart, Schaffner, and Marx, clothing manufacturers. Suspicion of absentee owners, who seem to take no responsibility of management, yet are there where they can take off the surplus earnings in time of prosperity, and lay off the workers in time of adversity, has been largely removed in certain establishments, the White Motor, the Ford Motor, the Wayne Knitting Mills, Filene's, and the Dennison Manufacturing Company, and this explains in part their success.

If we are right in this, that what labor wants, as a class, distinguished from what individuals want, is nothing more than security in a good job with power to command respect, then so much the greater is the opportunity and responsibility of management. Management, then, becomes responsible, not only to the stock-holder, but also to the workers and the nation.

IV

Modern capitalism has been built up on security of investments. It is not labor, or management, or machinery that produces wealth—it is the credit system, and the credit system is nothing but confidence in the future. Without the credit system there might be production of wealth, but it would be hand-to-mouth production of individuals who dare not trust their products out of their own hands, and society would sink back into feudalism and violence.

But while capitalism is based on security of investment it has not provided security of the job. Modern socialism is but a reply to the old theories of political economy which assumed that everybody was employed all the time, and that the elasticity which brought this about was the rise and fall of prices and wages through demand and supply. Karl Marx replied that the elasticity of the system was not in the law of demand and supply but in "the reserve army of the unemployed." And Marx was right. But he concluded that capitalism could not cure itself, and if so, there was nothing left but revolution and its overthrow. Socialism, anarchism, and trade unionism, all have their source in this fear of unemployment and the inability of capitalism to give security to the job as it has given security to the investment. They are wrong in so far as they conclude that by destroying security of investments they can obtain security of jobs.

They are wrong too, in so far as they conclude that capitalism cannot cure itself. The outstanding fact of our investigation is the importance of management. Instead of capitalism's moving on like a blind force of nature, as Marx thought, here we see it moving

on by the will of management. It is management that attracts capital through the confidence of investors, for the bulk of investors, like the bulk of laborers, do not want to manage and cannot manage industry. It is management that attracts laborers, but, if our conclusions are true, seventy-five to ninety per cent of management attracts labor, not by confidence in the future but by fear of unemployment. And so, when "labor" has no fear of unemployment, in times of prosperity, it "lays down" on the job, and when it fears unemployment, in hard times, its so-called "efficiency" increases. This is a curious paradox. In good times, when there is a shortage of products, labor enlarges the shortage by working slowly; but in hard times when there is a surplus of products, labor enlarges the surplus by working hard. This is not good business, from any standpoint, and it is because management has not learned how to utilize hope and security for purposes of discipline in place of fear of unemployment.

That management can learn and is learning, we have found to be true. In the White Motor Co., the entire policy turns on getting the employees to think and plan for the future, with the management. In the Plimpton Press, the Wayne Knitting Mills, the Dennison Manufacturing Company, the Joseph and Feiss Company, a good record has been made of balancing the sales department with the production department, so that no man is laid off in dull seasons or years. In the Milwaukee Street Railway absenteeism on account of sickness has been reduced one-half by health insurance. In other establishments which we visited, when the market slumped in 1920, the shop unions of employees were given the problem of meeting the situation and met it by laying off first those that

were willing, then those without families, then shortening the hours all round for those that remained. The Dennison Manufacturing Company prepared the way in the profitable years of the war, by setting aside an "employment fund" and then left the matter to its employees, through their representatives, to dispose of that fund and to enlarge it. Others have set up old age pensions.

V

On the whole we have seen enough, in these establishments to be convinced that management can provide security of the job if security is deemed important enough. It is, of course, not a simple matter to work out the details, and three-fourths to nine-tenths of employers cannot be expected to do it without pressure. That pressure was brought, in the case of unemployment through accidents, by the workmen's compensation laws. Those laws are, in effect, a tax on accidents, which can be evaded by preventing accidents. And accident-prevention has already, within ten years after the first laws, become a big feature of American capitalism, with its well-paid safety experts. They have even set about the education of the children in the schools and the education of the public on the streets, with the immediate result of greatly cutting down accidents in the factories. In

fact, capitalism, in the effort to cure itself of the insecurity of accidents, is doing more than politics, trade unions, schools, and all the rest of the public together have ever been able to do, for the public at large. This result has come simply because management, by the pressure of a tax on accidents, has begun to feel its responsibility to the workers and the nation.

Likewise it may be expected that a tax on absenteeism through sickness, which is health insurance, and a tax on unemployment through lay-offs, which is unemployment insurance, will bring capitalism as a whole to do what the establishments we visited have done, in reducing sickness and stabilizing employment. They are showing that it can be done, and the only question is: Is it sufficiently important to require all the others to do it? If it is sufficiently important and the insurance-tax is sufficiently great then capitalism will find the way to do it.

Capitalism can cure itself, for it is not the blind force that socialists supposed and not the helpless plaything of demand and supply, but it is Management. And the greatest self-cure that it needs today is security of the job, for it is the insecurity of jobs that is the breeder of socialism, of anarchism, of the restrictions of trade-unionism, and a menace to capitalism, to the nation, and even to civilization. Our investigations show beginnings in this self-cure of capitalism.

METHODS IN CREDIT ACCOUNTING

BY CHARLES M. NEUBAUER*

THE basis of all credit, whether received from a bank, banker, or another commercial house, must be the moral character of the borrower, and without that element no loan is safe even though secured, unless a certain amount of supervision, most often daily, is given the proposition. This, then, immediately presents the question: Is supervision profitable? To which the answer invariably follows that it is not! This is particularly true if the loan is what may be called legitimate, that is, presenting no undue or disproportionate amount of profit. Under this head would be classed the concern's general reputation in the trade, that is, whether its contracts and agreements are carried out in spirit as well as in letter; the personal reputation of its proprietors or officers; and the ability safely, properly, and profitably to conduct the business upon the part of the personnel. Or in other words, character and capacity must be definitely established before the financial statement becomes an important factor. It will take but a short time before the absence of these two will affect the financial statement to such an extent as to make it entirely negligible.

Assuming, then, the moral element as being beyond question, the financial condition next presents itself. At this point it is well to remember that bank loans are ordinarily made for short terms and are for the purpose of augmenting the working capital of a concern for a limited period at the height of the buying, manufacturing, or trad-

ing period. The loan supplements the invested capital of the proprietary interests during such a period, and it is not intended to become permanent. The general commercial bank loans run from 30 to 90 days, any term longer than that being considered more or less exceptional and consequently requiring further consideration as the additional time required becomes a most important element in the granting of the credit.

II

The Financial Statement. The form outlined below is an illustration of what a bank requires in the matter of financial information relative to a concern's standing in order to pass adequately and justly upon the granting of credit. The balance sheet occupies the place of prominence, supported by schedules of the various accounts of greatest interest to the banker, and schedules giving specific information as to acquirement, valuation, and liquidation of the different items which the schedule of the account itself is not apt to reflect.

The assets are divided into three items, viz., Quick, Invested, and Deferred Charges. Under Quick Assets are listed practically in the order of their liquidity, Cash on Hand, Cash in Banks, Notes Receivable, Accounts Receivable, and Inventory. Under this head the item of Liberty Bonds may also be placed. This, however, is for purely patriotic reasons and is noted here as a matter of information and as an exception to the principle upon which the segregation of items is

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based. The above list invariably comprises all the items permitted in this group, and unless the balance sheet contains some account other than those mentioned which will be turned into cash within, say, a three months' period and as much as possible of the doubt ordinarily attending such a conversion is removed, no other assets are added.

Under the title Invested Assets are such accounts as the following: Land, Buildings, Machinery, Fixtures, Equipment, Investments, and Patents and Good-Will. Any of the other so-called permanent assets are listed under this title.

Under Deferred Charges are entered all items of this nature, such as Unexpired Insurance, Premiums, Prepaid Interest, etc.

A separate total is carried out for each class and a grand total effected.

The Short-Term Indebtedness, or all indebtedness due within one year from the date of the statement, includes the following items in the order named, which is presumed to be also that in which the debts mature, viz., Notes given for Merchandise; Notes given for Borrowed Money; Accounts Payable; Liability for Acceptances under Letters of Credit; Deposits of Money; Dividends Unpaid and Accrued; and all other liabilities which can be classed as short-term or due within one year.

Long-Term Indebtedness embraces all liabilities due after one year from the date of the statement, and includes such items as Notes given for Borrowed Money; Deposits of Money; Bonded Debt; Mortgages on Real Estate or Chattels; all other liabilities due after one year, and any special reserves not deducted from the assets. In this respect it is to be noted that all reserves are to be deducted from the assets upon including the items in the statement.

Referring again to the Liberty Bond

item, a further concession is allowed in this connection, namely, that any indebtedness due to borrowing money for which Liberty Bonds are pledged may be deducted from the total par value of Liberty Bonds held and the Liberty Bond item stated net under the Quick Assets or simply the equity shown. No mention of the indebtedness then need be made upon the balance sheet.

Space is allowed for the capital items in the same section with the liabilities, and these are divided to show Preferred Stock Issued; Common Stock Issued; Surplus or Deficit. If there are any other classes of stock outstanding, these will necessarily have to be written into the statement under this caption.

The amount of forward purchases or commitments for merchandise, either on order or contract, is also considered a very important element, and space is provided for this information before the signature is requested.

III

Accounts and Schedules. An account for Contingent Liabilities is provided as this item is always considered in conjunction with the liabilities outstanding in the review of the statement. The account provides for the reporting of the nature of the original indebtedness and that under which it became a contingency.

The Profit and Loss and Surplus accounts, in so far as possible, should be transcripts from the books. This will probably require the totaling of some of the details reflected in the books, but nevertheless should adhere strictly to that data. Otherwise the accounts will not prove with the remainder of the statement or previous statements rendered and will cause a poor impression, and further questioning upon

CREDIT FILE No.

TO IRVING NATIONAL BANK, New York

BALANCE SHEET

(Federal Reserve Bank Requirement)

PAGE ONE OF THE FINANCIAL STATEMENT

SCHEDULE 2. NOTES AND ACCOUNTS RECEIVABLE									
DESCRIPTION						Notes Receivable		Accounts Receivable	
DUE FROM TRADE DEBTORS (Not including any item in "Other Debtors") For Merchandise Sold upon Regular Terms Accounts Receivable over Six Months Old or Past Due Notes						TOTAL TRADE			
DUE FROM OTHER DEBTORS , (Inter-Company, Controlled Companies, etc.) Officers, Directors, Stockholders or Employees Own Selling Houses or Branches Subsidiary Corporations Allied, Controlled or Affiliated Interests For Capital Stock Sold For Merchandise on Consignment Cash Advances (Security Therefor if Any) Commissions Due and Payable Other Accounts and Notes Receivable						TOTAL OTHER DEBTORS			
Less Reserves Created to Cover Possible Discount and Losses									
TOTAL AS PER BALANCE SHEET									
What Amount of Accounts or Notes receivable has been Discounted or Pledged?									

SCHEDULE 3. INVENTORY (Should be taken at cost or market price - whichever is lower)											
TAKEN		By		DESCRIPTION						AMOUNT	
				Finished Merchandise (How Priced*)) Merchandise in process (" ") Raw Material (" ") Supplies, etc Other Items Included in Inventory						TOTAL	
Less Reserve and Allowance for Merchandise of Obsolete Pattern or Otherwise not Readily Saleable										TOTAL AS PER BALANCE SHEET	
What Amount is held by you under Trust Receipt?											
What Amount do you hold on Consignment (Included in Inventory?)											
What Amount has been Pledged as Collateral for Loans or Advances?											
What Amount has been priced at more than Cost?											
What is Amount of Unfilled Orders on Hand?											

SCHEDULE 4. INVESTMENTS										
DESCRIPTION OF SECURITY	No. of Bonds or Shares Held	AMOUNT PLEDGED				PAR VALUE		BOOK VALUE		Income or Dividend Rec'd Last Year
TOTAL AS PER BALANCE SHEET										

SCHEDULE 5. DEPOSITS OF MONEY									
NAME OF DEPOSITOR	AMOUNT			MATURITY	Rate of Interest	Security, Endorsement or Guaranties			
TOTAL AS PER BALANCE SHEET									

these particular points will become necessary. Care should be exercised to have the opening balances of both the Profit and Loss and Surplus accounts agree with the balance of these accounts previously rendered, and that of the Surplus account with the previous statement rendered.

A memorandum schedule of Insurance is provided to show the adequacy of protection of every kind.

Schedule 1 combines Cash, Notes given for Borrowed Money, and liability for acceptances under Letters of Credit. The schedule is so arranged as to present the name of the bank with which the cash is deposited and the balance at statement date; the line of credit received from the bank in question; the amount owing on statement date under the line of credit extended divided between notes and acceptances; and finally what security, indorsements, or guarantees are given. If any notes are placed with note-brokers to be sold, this fact should be entered in the lower part of the schedule with all the other information enumerated above.

Schedule 2, Notes and Accounts Receivable, divides these items in separate columns between trade and other debtors. The trade total, being considered quick, should agree with these items included under Quick Assets on the balance sheet. The remainder necessarily would be reflected under the head of Invested Assets upon the balance sheet. The various headings in this schedule present a fair idea as to what is slow and removed from consideration in the final determination of working capital, so far as notes and accounts receivable are concerned. This schedule clearly indicates that all notes and accounts receivable are not looked upon in the same light by the banker, and consequently should not be lumped and thrown into the balance

sheet in one item as is so frequently done. Any reserve provided for this item should be deducted from the total of the schedule and the net amount only carried to the balance sheet under Quick and Invested Assets, according to the classification and distribution of the schedules.

Schedule 3, Inventory should be taken at cost or market price, whichever is lower, which in turn should not be difficult to remember in these days of the income tax. The schedule divides the merchandise into the various stages of completion, allows for the item of Supplies, which is not at all times considered as a good merchandise item to be classed as a Quick Asset. The exact status of the merchandise is also required, *i. e.*, whether it is pledged in any manner, on consignment, or out on trust receipt. Any reserve provided for merchandise should be deducted in this schedule, carrying the net amount of the item to the balance sheet, as in the case of Notes and Accounts Receivable.

Schedule 4, Investments, is a list of all investments held, such as marketable securities or stock or bonds of subsidiary companies, giving a description of the security, number held, amount pledged for loans, if any, the par value, and the amount at which it is carried upon the books with the yield, either interest or dividend, per year.

Schedule 5, Deposits of Money, is a list of money on deposit as a loan, noting the agreements under which it has been accepted and also the security given.

Schedule 6, Accounts Payable, is itemized to show the nature of the account, but this does not affect the distribution of the item between the Current or Short-Term Liabilities or Indebtedness and the Long-Term Liabilities, that factor being determined

IRVING NATIONAL BANK		Comparison of Assets and Liabilities CORPORATE FORM		NAME _____ BUSINESS _____	
ASSETS, LIABILITIES, RESERVES AND CAPITAL					
QUICK ASSETS	Cash				
	Notes Receivable				
	Accounts Receivable—Less Reserve,				
	Merchandise—Less Reserve				
	Liberty Bonds—Equity, Total Quick Assets,				
CURRENT LIABILITIES	Notes Payable—Banks,				
	Notes Payable—Others,				
	Acceptances Payable,				
	Accounts Payable,				
	Accrued Items,				
	Long Term Indebtedness Maturing, Due to Allied, Controlled, Affil., & Sub., Co's Total Current Liabilities,				
EXCESS—QUICK					
RATIO					
INVESTED, FIXED AND OTHER ASSETS	Investments,				
	Land and Buildings—Plants,				
	Machinery, Equipment and Fixtures,				
	Trade Marks, Formulas, Goodwill, Etc.,				
	Due from Allied, Controlled, Affil., & Sub., Co's.,				
	Due from Stockholders, Officers and Employees,				
	Advances, Loans, Deposits, Etc.,				
	Supplies, Samples, Etc.,				
	Deferred Charges,				
	Total Invested, Fixed and O. A's.				
OTHER LIABILITIES AND RESERVES	R. E. Mortgages, Bonded Debt., Etc.				
	Reserve—Depreciation of Plant Property,				
	Total Other Liabilities and Reserves,				
EXCESS—INVESTED, FIXED, ETC.					
RATIO					
CAPITAL ACCOUNT	Capital Stock Outstanding,				
	Surplus,				
	Total Capital Account,				
SUMMARY	ASSETS				
	Quick,				
	Invested, Fixed and Other,				
	Total,				
	LIABILITIES, RESERVES AND CAPITAL				
	Current Liabilities,				
	Other Liabilities, and Reserves,				
	Capital Account (Net Worth),				
	Total,				
Notes Receivable—Discounted					
For Details Please Turn Over					

FRONT PAGE OF THE COMPARISON SHEET

by the date of maturity of the item as has been mentioned.

Schedule 7, Bonded Debt, is an explanation with details of the outstanding bonds, if any.

Schedule 8, Real Estate, is a list of all real estate holdings of the undertaking, showing the equity held in the properties.

IV

Comparison Sheets. When the bank receives the statement outlined above, it is placed upon a comparison sheet, as shown below, allowing space for the comparison of about five periods and setting below one another the Quick Assets and the Current or Short-Term Liabilities. The items under these heads are in much the same order as on the sheet filled out by the applicant or borrower. The items under the two heads are totaled and a difference achieved. Presuming that the Quick Assets are in excess of the Current Liabilities, the result shows the amount of working capital used in the business. The ratio is calculated upon the dollar basis, giving the number of dollars and cents of assets in the Quick Assets to meet every dollar reflected in the Current Liabilities.

The Invested, Fixed, and Other Assets, or what are sometimes called permanent assets, are next listed and brought down to a total. These assets are offset by the other or Long-Term Liabilities with which are included the Reserves upon the Invested Assets. The excess of Invested, Fixed, and Other Assets is determined, and again a ratio is calculated showing the number of dollars of permanent assets invested to meet the dollars reflected in the Long-Term Liabilities.

The reserves upon this sheet for all the working assets are deducted from the gross amount of the asset to which these apply, leaving a net amount

which is used in the comparison sheet; whereas any reserves affecting the Invested, Fixed, and Other Assets are set up separately with the Long-Term Liabilities, permitting the total or original investments to be stated upon the comparison sheet. These reserves, of course, are in the nature of depreciation or valuation items.

The Capital Account is next listed, showing only two items, Capital Stock Outstanding and Surplus. When the statement shows a deficit instead of a surplus, the figure is placed opposite the word "Surplus" but written in red.

The Summary consists of the totals effected above, with the Quick and Invested Assets totaled to agree with the total of the Liabilities, Reserves, and Capital.

A line is allowed for the entering of the Notes Receivable Discounted or Contingent Liabilities.

The reverse of this sheet permits of the verification of the notes payable so far as the particular bank is concerned and also the noting of any other detail, such as profit and loss and surplus, data which is thought to be of interest in comparison when the profit and loss statement is not placed upon a separate comparison sheet.

V

Other forms of comparison sheets in use are: Comparison of the Income and Capital Account; Comparison of Excess Quick, Excess Slow, and Net Worth and the Borrowers Statement of Assets and Liabilities; comparison of two periods with increases and decreases—illustrations of all of which follow.

The forms illustrated above are all used for the corporate form of business organization and differ from the firm or single proprietorship form only in the capital accounts. In so far as this

Irving National Bank	COMPARISON OF INCOME AND CAPITAL ACCOUNT CORPORATE FORM	NAME _____ BUSINESS _____
PERIOD—NUMBER MONTHS		
PERIOD—ENDEO		
INCOME ACCOUNT		
Net Sales, Increase (Black) Decrease (Red)-Per Cent Cost of Sales, Gross Profit on Sales-Per Cent., Expenses and Other Charges, Net Profit from Operations, Net Profit on Sales-Per Cent., Other Income, Total Income, Less-Cash Dividends,		
Balance transferred to Surplus,		
CAPITAL ACCOUNT		
Surplus: Balance transferred from Income Account, Other Additions, Surplus-Beginning, Total, Deductions-Stock Dividends, Other, Surplus-Ending, Revaluation of Assets-Net, Book Surplus-Per Balance Sheet, Capital Stock-Outstanding: Original and Dividend Issues, New-Far Cash or Equivalent, Net Worth,		
OTHER DETAIL		
Average Sales-Per Month, Average Operating Expenditures-Per Month, Average Cost of Mds. Used-Per Month, Estimated Minimum Quick: Cash, Receivables, Merchandise, Total Estimate Minimum Quick Salaries of Officials during above Period,		

SHEET FOR COMPARISON OF INCOME AND CAPITAL

difference is of minor importance only, it is not thought necessary to show these in illustrations.

Now what is the reason for what probably seems to the average business man who reads a detailed description of this procedure for the first time to be an amount of work unwarranted by the result to be achieved?

First, the bank may loan money in the following manner:

It may loan its capital, surplus, undivided profits, and general deposits, subject to restrictions as to maintenance of reserves and to limitations; also it may discount.

Loans and discounts may be secured or unsecured, time or demand, long- or short-term; and discounts include acceptance by bank of notes, drafts, or bills of exchange under certain restrictions and limitations.

The law imposes no limit on the total amount the bank may accept or discount for one person, firm, company, or corporation in bills of exchange or drafts secured by shipping documents conveying or securing title to goods actually shipped; or in demand obligations when secured by documents covering commodities in actual process of shipment.

No limit is placed on total amount bank may advance against commercial or business paper (of other makers) to any one person, firm, etc., providing the person, firm, etc., negotiating the loan actually owns the paper.

All of these fields are covered by a bank's loans and the aggregate reaches quite a sum. And in providing safeguards for the total, the various component parts are examined and passed upon separately, insuring for the entire amount loaned a degree of safety to be achieved in no other way.

The first question that a banker wants answered concerns the liquid condition of the business. How much

working capital is employed? What is the ratio of Quick Assets to Current Liabilities? These questions are answered by the comparison form.

The popular ratio between Quick Assets and Current Liabilities is 2 to 1. The term "popular" is used advisedly as conditions and situations of different kinds tend to make it impossible for every business undertaking to show a 2 to 1 ratio on their financial statement, and means that the business is in exactly as good a condition financially as the next report considered, having the same ratio. Therefore, some concerns with a lower ratio nevertheless present a very healthy appearance when all the factors are considered. Among these factors to be considered would be: nature of the business; particular season for that business; how financed; extent of permanent capital; status of indebtedness (when due). If the working capital is not sufficient, the question arises as to whether the loan will supply the deficiency and whether the ratio is large enough to take care of the additional indebtedness to be incurred by borrowing from the bank.

VI

These questions lead to an inspection of the items listed under Quick Assets to determine the following points:

Is there sufficient actual cash to meet indebtedness maturing immediately?

Are collections sufficiently prompt to furnish additional cash as required?

What is the merchandise turnover? How many months' supply of merchandise is on hand? Is it adequate or is it more than adequate and considered heavy, requiring more money than is warranted to carry it?

If the merchandise item is heavy, what is the cause? Is it the carrying

Irving National Bank		COMPARISON OF EXCESS QUICK, EXCESS SLOW, AND NET WORTH CORPORATE FORM										NAME _____		BUSINESS _____	
Net Worth and How Invested												Increase Decrease			Increase Decrease
Excess Quick															
Excess Slow															
Net Worth															
Net Worth and How Invested												Increase Decrease			Increase Decrease
Excess Quick															
Excess Slow															
Net Worth															
Net Worth and How Invested												Increase Decrease			Increase Decrease
Excess Quick															
Excess Slow															
Net Worth															
Net Worth and How Invested												Increase Decrease			Increase Decrease
Excess Quick															
Excess Slow															
Net Worth															
Net Worth and How Invested												Increase Decrease			Increase Decrease
Excess Quick															
Excess Slow															
Net Worth															
Net Worth and How Invested												Increase Decrease			Increase Decrease
Excess Quick															
Excess Slow															
Net Worth															
Net Worth and How Invested												Increase Decrease			Increase Decrease
Excess Quick															
Excess Slow															
Net Worth															
Net Worth and How Invested												Increase Decrease			Increase Decrease
Excess Quick															
Excess Slow															
Net Worth															

NOTE. Record Excess Assets over Liabilities in Black and Contra in Red
Record Increases in Black and Decrease in Red

COMPARISON SHEET—EXCESS, QUICK AND SLOW

of obsolete merchandise in the hope of finding a market? Is it overbuying on a rising market and holding after the peak has been reached? If such a condition obtains, what is the possibility of disposal and at what prices?

VII

To ascertain some of the above points, ratios are relied upon, such as Sales to Receivables to ascertain the number of months outstanding based upon average monthly sales, and thereby to determine the promptness of collections; Sales to Merchandise to determine merchandise turnover, and again based on average monthly sales (at cost) to determine number of months' merchandise supply on hand, which will quickly reflect a heavy merchandise condition. Sometimes, if it becomes a factor due to the conditions presented by the statement, the ratio of Receivables to Merchandise is ascertained upon the monthly basis to determine the extent of the profit reflected in receivables, which may not materialize quickly if collections are not prompt.

At this point, it may be mentioned that in some at least, if not in all cases, the average merchant is too lenient in his calculations to determine the cost of carrying obsolete stock. It is thought that if the actual charges of carrying such merchandise were placed against the item definitely by opening an account for this purpose, the inadvisability of carrying merchandise for an undue length of time due to the expense incurred, would quickly assert itself by being brought forcibly to the attention of the executives responsible. The accounts need only be memorandum, although the unsatisfactory nature of such an account is admitted; however, for this purpose an exception may be made and the proportionate

share of interest, rent, and various other charges applying thereto correctly set forth. The profit which might have been made upon the normal turnover of merchandise having a ready market for the period, while the obsolete stock has been held, is also a subject for consideration in this connection.

Another method of detecting the carrying of obsolete merchandise arises out of the experience of a prominent bank credit man, who states that it is easily discernible in steady or continuous borrowings. This information is outside and apart from the financial statement, and is part of the bank's record of experience with a specific account and is considered very important by the banker for purposes of reference. It must, however, be stated in this connection that "steady" borrowing does not entirely or only indicate obsolete merchandise, as insufficiency of capital is the general reason for such a condition.

The Quick Assets should only include those which, through the regular operation of the business, practically, automatically, and within a reasonable time, say 90 to 120 days, will be turned into cash; the exception being Liberty Bonds as heretofore noted.

The reasonable time in any particular case depends upon the terms of the trade or those extended or received by the particular undertaking. This time becomes the basis for determining whether the accounts outstanding are in accord with the requirements, or whether they exceed an amount beyond which the dictates of conservative management should not permit the granting of credit to extend.

It is also well to know that adequate insurance is carried upon the merchandise inventory or stock, and, if this information is not presented, inquiry should be made in regard thereto.

Name _____							
BORROWER'S STATEMENT OF ASSETS AND LIABILITIES							
Comparison _____ 19____ and _____ 19____							
CORPORATE FORM							
	STATEMENT DATES		INCREASES	DECREASES			
	_____ 19____	_____ 19____					
QUICK ASSETS							
Cash,							
Notes Receivable,							
Accounts Receivable, Less Reserves,							
Merchandise, Less Reserves,							
Liberty Bonds (Equity),							
Total Quick Assets,							
CURRENT LIABILITIES							
Accounts Payable,							
Notes Payable, Banks,							
Notes Payable, Other,							
Acceptances and Drafts Payable,							
Long Term Indebtedness Maturing,							
Accrued Items,							
Total Current Liabilities,							
Excess, Quick,							
Ratio,							
INVESTED, FIXED AND OTHER ASSETS							
Investments,							
Land and Buildings, Plant,							
Machinery, Equipment and Fixtures,							
Trade Marks, Formulas, Goodwill, etc.							
Allied, Controlled, Affiliated and Sub. Co's.,							
Stockholders, Officers and Employees,							
Advances, Loans, Deposits, etc.							
Supplies, Samples, etc.							
Deferred Charges,							
Total Invested, Fixed and Other Assets,							
OTHER LIABILITIES RESERVES & CAPITAL A/c.							
R. E. Mortgages, Bonded Debt., etc.,							
Reserve for Depreciation of Plant Property,							
Reserve For,							
Allied, Controlled, Affiliated, and Sub., Co's.							
Capital Account:							
Capital Stock Outstanding,							
Surplus,							
Total Other Liabilities, Reserves and Capital A/c							
ASSETS							
Quick,							
Invested, Fixed and Others,							
Total,							
LIABILITIES, RESERVES AND CAPITAL							
Current Liabilities							
Other Liabilities, Reserves and Capital Account,							
Total,							

STATEMENT SHEET FOR ASSETS AND LIABILITIES

Claims of any nature whatsoever, or accounts in dispute, judgments and like items, are not permitted to be included in the Quick Assets but must be shown under a separate title in the section provided for the Invested, Fixed, and Other Assets.

When any doubt exists as to the liquidity of the Accounts Receivable, an examination should be made and the accounts aged according to the terms granted to customers, and all accounts exceeding the time allowed by the limit of the terms, plus a fair leeway to allow collections to arrive and postings made, should be excluded from consideration under Quick Assets. At such a time the claims, etc., can also be eliminated.

Before leaving the Quick Assets it should be noted that any pledged items have no place in that division of the balance sheet. This refers particularly to Notes and Accounts Receivable, as the Liberty Bond item receives separate treatment. Any amounts so pledged should be deducted from the total of the item and included among the permanent assets until released. This treatment necessitates the showing of the liability and is to be preferred to the omitting of both items, for which there does not seem to be any defence although it is practiced to some extent. The former treatment clearly depicts the actual status of the account and consequently will not lead to incorrect inference.

VIII

Current Liabilities can easily be interpreted to be those that become due within one year from the date of the statement. Hence, every indebtedness, irrespective of its nature, coming under this category will be considered current and as an offset to the Quick Assets. That mere assertion,

however, does not dismiss the subject.

Notes Payable Banks are investigated to ascertain the extent to which the various bank lines of credit have been used. The date of maturity also plays an important part as funds will be needed to pay off when the note becomes due or arrangements for renewal will have to be made. This sometimes is the danger signal. When it is not desirable to renew at the banks, the necessary funds must be provided from other sources and an inspection at date of statement will serve as a forewarning of action that should be taken.

The amount of Accounts Payable outstanding is very interesting in presenting the availability of liquid funds to meet this indebtedness. As with the accounts receivable, the number of months' business outstanding and unpaid upon the date of the statement is of particular interest. This is determined by arriving at an average monthly purchase figure and dividing the accounts payable by that amount. Of course, if these figures develop a condition which shows that several months' purchases in excess of time allowed by the terms of purchase, plus a fair leeway, are outstanding, it is cause for further inquiry and perhaps examination.

Especially at this time is the item of Acceptances Payable of particular interest, and whenever possible full details are requested to establish, if foreign, what countries are involved, the nature of the transaction covered, and the form of financial arrangements, whether under letters of credit and what kind, and, if there is any unused portion of the letter of credit outstanding, what the likelihood is of drawing against the balance in the near future.

Accrued Items are invariably due within a short time of their calculation,

and consequently considered part of the current liabilities.

Any proportion of Long-Term Indebtedness which matures within a year from the date of the statement is included among the Current Liabilities, in so far as ways and means must be provided to meet this indebtedness in the present or current period. An illustration of such an item would be an issue of serial bonds, a certain amount maturing each year beginning with a certain date. That proportion of the issue the maturity of which would fall within one year of the statement date, would be included as a current liability.

The amount due to Allied, Controlled, Affiliated, and Subsidiary Companies is considered a current liability, as the request for the payment, even though not in keeping with the terms under which the money was loaned or the purchase made, would ordinarily be met, especially if the company making the statement was the parent concern. The only question that would arise in this connection is the existence of a written agreement providing for payment some time in the future and more than one year from the date of the statement.

What appears to be an inconsistency is presented at this point, viz., the inclusion of the amount due to allied, controlled, affiliated, and subsidiary companies as a current liability and the inclusion of the amount due from these companies under the section provided for the Invested, Fixed, and Other Assets or the slow assets. The reasons given for classing the first set as current liabilities shows the consistency of the policy of treating the amounts due from these companies as slow assets, because it is argued that a request for the payment upon the part of the subsidiary company would be immediately met by the parent company; it would

follow that in case of financial stringency the parent company would be rather lenient with its subsidiary in the collection of amounts owing to it (the parent company). In other words, this method of financing companies is sometimes resorted to, and when done it is not discernible by an inspection of the balance sheet that the terms of the agreement under which the debt was contracted have been extended.

From the viewpoint of the credit analyst, the Invested, Fixed and Other Assets present very many aspects and features in common. This question often presents one of policy of the concern in regard to depreciation, amortization, appreciation, mortgages, ownership, protection, and improvement.

Real Estate or Land and Buildings should be shown gross with the mortgage, if any, as a deduction, or, if the form illustrated before is used for the report, then as a separate item under the liabilities. However stated on the report, the gross value and mortgage are entered separately on the comparison sheet in order to show the fluctuations from year to year or between accounting periods. The proper amount of insurance should be carried and so reported. Depreciation is also entered separately under the Long-Term Liabilities. These two items just mentioned form the principal items under the Long-Term Liabilities section of the comparison sheet. The above division of these transactions readily sets forth upon the comparison sheet the policy (or the absence of policy) of the concern in regard to depreciation. The amount of depreciation should be adequate, depending upon the nature of the asset. Also, increases would be clearly shown, bringing to the fore the question as to whether all improvements are capitalized or whether this applies only to

additions. Also, whether the increase is due to appreciation, and, if so, upon what basis was the appreciation calculated and authorized? Whether this basis is fair and the policy conservative are other questions to be answered.

The item of Machinery and Fixtures is treated in very much the same manner as Land and Buildings on the comparison sheet. The questions raised in regard to Land and Buildings can be applied just as effectively to this item. Of course, the percentage of depreciation would most likely be higher, and the fluctuations greater from year to year. An additional point, however, is raised in regard to Machinery and Equipment, and that is obsolescence, for which due allowance must be made in the depreciation item. The mortgage also would be a chattel mortgage and not placed in the same class with mortgages on buildings. In fact, a chattel mortgage would immediately raise suspicions as to the financial condition of the undertaking or borrower.

Trade-Marks, Patents, and Good-Will are always susceptible to large yearly deductions for depreciation or amortization, and the banker generally looks for the reduction at the same time while scanning the item. The worth of these items is in most cases entirely dependent upon a going concern and would have little real value to an undertaking in liquidation. Consequently, a conservative policy calls for a reduction of these items and a gradual elimination, in fact, as much as the business will bear. Good-Will is at best only set up during a change in ownership to represent the intangible values, and as quickly as possible thereafter written off.

The difference between the totals of the Invested, Fixed, and Other Assets and the Long-Term Indebtedness should reflect a sufficient amount of

capital investment upon the part of the owners to give assurance of the permanency of the undertaking. The commercial banks, meaning thereby the national banks, ordinarily will not loan funds to be placed in any of these items for reasons which are obvious in view of explanations made in connection with the other balance sheet items. The ratio effected at the bottom of this division of the balance sheet is not looked upon as quite so important as the one above showing the working position, but it is nevertheless considered of importance to show the relative permanent position from year to year.

IX

The Capital Account does not present any especial problem providing sufficient particulars are submitted to permit an intelligent reading of the item. Various ratios are based upon the capital item, viz.: Sales to Capital to ascertain the capital turnover, which should not be confused with the merchandise turnover heretofore mentioned; Capital to Fixed Assets to show proportion of capital to invested; Total Debt to Capital to show the employment of outside capital and any overextension.

Overextension deserves some comment under this heading. This condition exists when the capital is exceeded by the debt, and the seriousness of the situation depends on the amount so overextended. This condition places the creditors practically in the position of co-owners with the actual proprietors and should always be given prominence in any comments made upon the balance sheet. Some bankers insist upon including with the liabilities any contingent liabilities which are outstanding and then deducting the total capital investment from this sum. Naturally this shows

upon inspection a condition very much worse than the first method. This method, however, would seem to be unfair and to work a hardship upon some undertakings, which in the very nature of their business must discount acceptances to secure the cash necessary to continue operations, were it not that a greater ratio is allowed such concerns in consideration of this particular phase of their statement. There is, however, a certain unfairness in charging as a contingent liability an acceptance issued under a confirmed or irrevocable letter of credit which has been discounted, unless this fact is taken into consideration and the items of this nature deducted from the total contingent liability.

The financial statement lends itself readily to numerous other ratios of more or less value, but the ones of greatest importance are those mentioned, which are repeated for the purpose of showing them in one place, viz.:

- Quick Assets to Current Liabilities
- Receivables to Merchandise
- Capital (Worth) to Fixed Assets
- Sales to Receivables
- Sales to Merchandise
- Sales to Capital
- Debt to Capital
- Purchases to Payables
- Purchases to Merchandise

Contingent and General Reserves are considered in the nature of surplus set aside for emergencies and listed in the section provided for Long-Term Indebtedness and Reserves upon the comparison sheet. Unless a reserve

is especially designated to apply against a specific asset it is considered general, and the result more often than not of the policy of conservative management, for which it is thought that the borrower should not be penalized as would be the case in including this amount under the Current Liabilities. In the final analysis in this connection there is placed upon the management very little restriction, which would prevent it from transferring such a reserve back to the Surplus account at any time.

There is some difference of opinion in the minds of bank-credit men as to just where, upon the comparison sheet, Contingent Liabilities should be included. The form submitted herewith provides a space at the bottom of the sheet clearly marking it as a contingent liability. To the accountant, there does not seem to be any other reasonable handling of this item. However, some credit men prefer the item placed with the Current Liabilities, claiming that the method set forth here will show the worst possible condition. This does not appear to be justified, whereas the condition shown is very much poorer and mistakes in granting credit might be minimized; such a condition also makes it possible to make mistakes in not granting credit, which might become just as vital. Therefore, the conclusion is reached that the fairest presentation is the one which recognizes the element as it is and treats it accordingly, irrespective of the resulting effect upon the ratios and totals.

THE BUSINESS MAN AND THE RAILROADS

BY THOMAS DEWITT CUYLER*

WHAT is the railroad problem? Briefly it is this: "How can the Nation get and maintain good transportation service?"

Good railroad service means this: Cars always available when needed, equipment in good condition to carry the kinds of products which they were built to carry, ample trackage, storage and handling facilities, dependable time tables, fairness of rates both to the public and to the investors whose money has made the railroads possible, stability of rates, economical and efficient administration, genuine courtesy and helpfulness upon the part of railway personnel.

The American people, especially the business man and farmer, have become convinced that bad railroad service is dear at any price, and that more money can be lost through bad service than in paying rates which are adequate to supply permanent good service.

To the public the railroad problem is one of results.

To the railroads the problem is one of ways and means to attain those results.

To the railroads, therefore, their problem is both a business and a human problem. The business problem is the maintenance of credit, without which growth is impossible or even the continuance of good railroad service without additional lines.

The human problem is one of capable personnel, and satisfactory relationships with labor as well as with the public at large.

Conditions are ever changing and the railroad problem can therefore never be regarded as finally solved. A program, however, may be determined upon as likely, in the long run, to come nearest to a hundred per cent solution. Of all possible programs only these have had any considerable following:

1. Private ownership under Government control.

2. Government ownership and Government operation.

Other plans are conceivable, for example, soviet ownership and control as in Russia, or a system approaching that known as "The Plumb Plan"—a mysterious mixture of Government ownership and financial responsibility, coupled with employee control. This would establish the railroad system in a category by itself in which one class in the community, namely, railroad employees, would be a privileged class as compared to all others in the Nation.

The decision of the people of the United States in favor of legislation establishing private ownership and Government control, with the Transportation Act of 1920, has been adopted for these reasons:

1. To assure to the public fair rates and good service by preserving in railroad management and work that spirit of individual enterprise, economical administration and competitive emulation in good service which are lacking in governmental work.

2. To establish rates which will not only be fair to the public but establish and preserve the credit of the railroads so as to insure their extension in localities where new lines are needed and

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the expansion of equipment and facilities where railroads are already established, so that the needs of the entire nation may always be met.

3. Last, but not least, to maintain skilled personnel and to maintain a high morale in a system which preserves American traditions and one which has given to America, notwithstanding the experiences of the war and the resulting increase of rates, a railroad service cheaper and better than any other in the world.

The distinguishing difference between the Transportation Act of 1920 and all previous regulatory railroad legislation is this, that it recognizes *constructively* the public power over the railroads; and the resultant responsibility of enabling the railroad to earn the means through which it can provide at all times railroad service sufficient to meet the public demand.

Preceding legislation has been in the main simply repressive or punitive. The Transportation Act of 1920 is not a demonstration as yet; it is an experiment. And this brings us down to the immediate point and the present time: How is the Transportation Act of 1920 working? What may be expected of it?

The railroads were turned back to the owning companies on March 1, 1920, and have at this writing been under private operation for about ten months.

When the railroad companies resumed operation of their properties on March 1st, an unusually large number of cars and locomotives were in bad order; the stress of war conditions had compelled their use in a most intensive manner, and the time was at hand when much of the rolling stock was due for thorough repair. A very small proportion of the cars of any road was on its own lines; equipment was badly distributed with reference to the needs of traffic.

Normally freight cars are on their home lines about half the time and can be repaired in the home shop. When the railways were taken over by the Government the average percentage of home cars on line was 44% or slightly below normal. When they were released by the Government the percentage had been cut in half to 21.9%. About one in five of freight cars was on its home line but, in the case of box cars, only about one in nine was on its home line. This and the necessities of war-time operation resulted in cars being returned to their owners in bad physical condition.

There were no stocks of coal left over from the preceding year; a vast amount of grain remained on hand from the preceding year; and a volume of business was being offered which seemed beyond the ability of the railroads to move.

In addition, railroad labor was in an uneasy and dissatisfied frame of mind. The railroads inherited pending wage demands amounting to approximately \$1,180,000,000, and while every effort was made by the railroads to bring the wage question to a satisfactory conclusion through the United States Railroad Labor Board, there developed in April outlaw strikes which produced effects wholly disproportionate to the number of men ceasing work.

The roads, indeed, faced a period of radical readjustment, filled with dangers and difficulties, not the least of which had to do with administrative personnel and morale of employees which had suffered as a result of the war.

Interstate Commerce Commissioner Aitchison, who has been in direct charge of our service matters for the Interstate Commerce Commission, has said:

The condition in the spring of 1920 was more menacing to the domestic welfare of

the country than it was in the early winter of 1917 when Federal control was assumed. But the situation was met, squarely and courageously in a businesslike way, without political interferences or pressure of any character whatsoever, under the orderly processes of law, by privately operated railroads, directed along consistent lines to secure that unity of object and policy which was the end sought in placing the carriers under Federal control during the war.

With the foregoing facts in mind we may now ask: What has been the result of operation in the months since the roads were returned to the owning companies?

The seriousness of the situation was recognized by the Association of Railway Executives. They appointed an Advisory Committee of eleven railway executives, geographically representative, to initiate and carry on a co-operative campaign for more transportation out of existing equipment. As a part of this campaign the Car-Service Section of the Railroad Administration was reorganized as the Car Service Division of the American Railway Association and was assigned much of the detail work of the campaign.

Among the factors of the campaign were re-location of cars, reduction of car shortages and car accumulations and, in general, a more intensive utilization of plant and equipment. The Advisory Committee set forth as the definite immediate object of its campaign these things:

1. An average daily minimum movement of freight cars of not less than thirty miles. This is a higher average than had ever been attained over any period of time in the history of railroads in the United States.

2. An average loading of thirty tons per car. This also represented a substantial increase over previous records.

3. Reduction of bad order cars to a maximum of 4% of the total owned.

4. An early and substantial reduction in the number of locomotives unfit for service.

The co-operation of the shipping and receiving public was sought by the railroads and the response was willing and general. The result since obtained would not have been possible without it.

II

Two instances of outstanding importance have occurred since the return of the roads to their owners: First, the award by the United States Railroad Labor Board of an increase in wages amounting to about six hundred and thirty-four millions of dollars, retroactive to May 1st to the railroad employees; second, the establishment of new freight and passenger rates which went into effect on August 26th.

One of the prime results of the labor award was an improvement of the morale among the employees and to this is attributed a large part of the operating success which the railroads have had. The financial results due to new rates are not yet sufficiently established to warrant any broad general conclusions.

In the nine full months since the Government turned back the railroads to their owners on March 1st, the railroad companies under private operation have:

1. Increased the average movement per freight car per day 6.3 miles—from 22.3 to 28.1 miles.

2. Increased the average load per car 1.7 tons—from 28.3 to 30 tons.

3. Made substantial reduction in the number of unserviceable locomotives.

4. Reduced the accumulation of loaded but unmoved freight cars from 103,237 on March 1st, to 21,991 on December 3rd, of which only 6,386 were detained because of the inability of the roads to move them.

5. Relocated approximately 180,000 box cars from the East to the West for the movement of farm produce.

6. Relocated approximately 180,000 open top cars from the West to the East to keep up the production of coal.

7. Moved the third highest coal production in the history of the country.

8. Spent over \$500,000,000 extra on improving the maintenance of tracks, bridges, cars and locomotives.

9. Contracted to spend about \$250,000,000, largely out of earnings, for additions and betterments to promote the movement of cars.

10. Made arrangements to purchase approximately 50,000 new freight cars, 1,500 new locomotives, and 1,000 new passenger cars.

11. Begun the reconstruction of thousands of old cars.

12. Moved—with a deteriorated plant, under disturbed labor and business conditions—the largest volume of traffic ever known in a single year, with the highest efficiency yet achieved, and with a minimum addition to the value of the property on which the public has to pay a return through rates.

The annual report of the Interstate Commerce Commission filed with Congress on December 9th states:

Comparing August 1920 with August 1919 the increased mileage had the effect of increasing the car supply 287,694 cars; the increased tonnage per car had the effect of increasing the car supply approximately 104,942 cars.

The railroad companies have manufactured increased transportation capacity, not out of new cars and locomotives, but out of increased efficiency.

III

As to financial results it may be said that in the six months between March 1st and September 1st, 1920, the rail-

roads which accepted the Government guarantee fell short by about \$668,000,000 of earning the standard return for the half-year period.

Why did the roads fail to earn that guarantee in the six months? Four most important circumstances are these:

1. The roads were returned on March 1st without having their rates readjusted to the existing higher levels of wages, increased prices of coal and other materials and higher taxes.

2. Shortly afterwards (July 20) the railroad labor board raised wages again for a total of about \$625,000,000 a year and made the increase retroactive to May 1st. This alone added to the deficit approximately \$268,000,000.

3. That the adjustment on railroad rates necessary to meet these costs could not be determined for six months and could not be made retroactive.

4. The roads were returned with maintenance of equipment so much behind that extraordinary expenditures were inevitable to handle the unprecedented traffic demand.

That balance of the deficit not caused by increased cost of labor represents a discrepancy between expenses and earnings which existed under Governmental control and was continually increasing as other items of expense increased without a corresponding increase of rate.

The conditions under which the railroad operated during the six months from March 1st to September 1st were not established by the railroads and would have affected the income of the road had they remained under Governmental control just as they did under private control.

The importance of the wage increases can hardly be overestimated. The wage increase was in its sum total the greatest ever awarded to any body of workers. The pay-roll of the railroad

is now approximately one and three-quarters of billions of dollars a year greater than it was three years ago.

Beginning September 1st the railways have been "on their own" financially, without Government aid or guaranty. While the railway earnings in September produced a net income of 4.1% (annual basis) on the tentative valuation fixed by the Commission for rate-making purposes, the amount in October was approximately 4.9%. October was the peak month of traffic, and since then there has been a falling off, partly but not entirely seasonal.

Some of the freight carried in September was carried under rates which existed previous to August 26th. At the present time there is a seasonal falling off of tonnage and of course no one can accurately forecast the future.

However, it may be said that the railroads, just as they have always done under adverse circumstances, will continue their program and especially will they endeavor to increase the efficiency of equipment so that it may be doing more work under the same overhead charge.

The situation at present is such that with few exceptions the railroads are handling all business as it is offered.

But America does not stand still. What of the future? One of the purposes of the Transportation Act was to assure to the roads the needed equipment against future demands. What have the railroads done towards providing themselves with additional equipment and facilities?

These questions deserve a fair answer. First, as to additional equipment:

The railroad companies have ordered approximately 50,000 freight cars this year and are attempting to make financial arrangements which will enable them to increase this sum total to about 60,000. Of these some 15,000 will be refrigerator cars.

The companies have ordered or are making financial arrangements to purchase approximately 1,500 additional locomotives and about 1,200 passenger cars. The total cost of the equipment purchased and arranged for will be about \$349,500,000.

In addition to this the Pullman Company is building 500 Pullman cars this year, some having been built during the period of Federal control.

IV

In a magazine article of this sort there is space for only brief mention of the additions and betterments to fixed property. Capital expenditures on fixed property this year have necessarily been largely confined to those which would promote movement of cars. It is impossible for the carriers even if the present rate increase brings them a six per cent return to go into a seven or eight per cent money market and raise large sums of money for capital improvements.

Expenditures made have generally looked toward the enlargement of round-houses and engine terminal capacity, the increase of shop machinery, tools for the repair of equipment, the extension of sidings, additional yard tracks, interlocking devices, automatic signals, and heavier rail and ballast. In addition, a number of important carriers have been double tracking, strengthening bridges, reducing grades and other work necessary for the extension of the operation of heavier locomotives and larger capacity cars.

Among the many important projects under foot are:

1. The application of heavier power to the Chesapeake & Ohio Railway Company.

2. The building of a double track on the ruling grade of the Virginian which

will almost double its coal-carrying capacity.

3. Three big freight yards on the New York, New Haven & Hartford.

4. The elimination of a limiting tunnel on the Delaware & Hudson.

5. The extension of the Louisville & Jeffersonville bridge.

6. The building of a cut-off on the Kanawha & Michigan.

7. Shortening curves and reducing grades on the Norfolk Southern.

8. The construction of a big grain elevator at Baltimore by the Pennsylvania Railroad.

9. The enlargement of yard and engine facilities on the Texas and Pacific and the Wheeling and Lake Erie.

10. And the extension of the coal pier of the Western Maryland at Baltimore.

All told, it is estimated that the carriers are expending some \$300,000,000 upon such improvements of which about \$70,000,000 is being financed by loans from the fund provided by the Transportation Act and most of the remainder out of earnings.

When it comes, however, to genuine expansion of the railroad plant, that cannot be looked for in any large meas-

ure until there is something like a world-wide readjustment of the conditions of money and credit which would enable an industry with a six per cent earning power to compete against other industries for large sums of money in the investment market.

When that times comes, the railroads will undoubtedly make the largest possible use of it, but until then sound policy on their part was well expressed by Interstate Commissioner Aitchison, in his speech in Washington on November 10th, when he said:

The present financial situation coupled with the apparent downward trend of construction costs, makes it seem imprudent to engage upon any undue or avoidable construction programme until conditions become more normal. . . .

The managements of the railroads are fully alive to their responsibilities to the public in general and to the business man in particular in rendering service and are putting their properties in shape as rapidly as possible; but they must, in the public's interest, as well as their own, make expenditures with that prudence which both morally and legally they are bound to exercise.

THE STUDY AND PURPOSE OF STATISTICS

BY ARCHER WALL DOUGLAS*

A CURIOUS fallacy exists today among business men as to the purpose of statistics and the extent to which they can be profitably used. It is somewhat akin to the obsession which, not so long ago, possessed us in relation to efficiency systems and the part they should play in the world of commerce. For some years we labored under the delusion that elaborate mechanical systems devised by efficiency experts were the best and only methods of securing efficiency of operation in a complex organization, oblivious to the fact that most of these efficiency experts were absolutely ignorant of the nature of the business they sought to improve. That many of them were adventurers and fakirs trading on the credulity of otherwise hard-headed business men was also often overlooked. Ultimately we learned that while system, as simple, not as elaborate, as possible, is desirable for every business, any system not guided by human intelligence and human efficiency is a mere stumbling block instead of a dependable aid. Despite these facts, much of the business world today still labors under the mistaken belief that there is some magic formula in statistics which can be used as a safe guide to business action, and that a trained statistician is the best analyst of the happenings of the day as affecting the commercial world and its most reliable prophet as to the future.

The only man who can tell anything about either the present or the future

is he who is in touch with facts, and not solely with the figures which are often mistakenly supposed to represent these facts. And yet there are innumerable statisticians, remote from the scene of action, who from their desks in the fastness of some great city analyze present business tendencies and future likelihoods, which are largely accepted as gospel truth and evidence of great wisdom and foresight.

The only possible description which fits the situation is that paragraph in the New Testament which tells of the blind leading the blind and both falling into the ditch. The limited scope of statistics lies in this, that in the great majority of cases they are imperfect, incomplete, and more or less inaccurate. Nor can it ever be otherwise in a country so vast as ours and so complex in all its industries.

Statistics of small sections of the country, and of industries and enterprises of limited nature, can often be had with very close approximation to accuracy. But these statistics are the ones usually not in demand, because the facts they set forth are generally sufficiently obvious not to need setting down in figures. But the story of statistics of great matters and of widely extended industries and occupations is a far different matter.

Decennial census figures are the only ones which are all-embracing. But their usefulness is extremely limited. By the time they are tabulated and available, they already largely represent the things of yesterday, and of course this becomes even more the case as time goes on. More-

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over, anyone familiar with the caliber of the human material necessarily employed in gathering and collating census figures, knows full well that the results at best can be taken as only approximate. In the nature of things they cannot be absolutely accurate, and the question remains as to their degree of accuracy—a question impossible to answer.

In the case of a large manufacturing industry, say in textiles or some of the finished forms of iron and steel, the story is different and more encouraging, because frequently associations of manufacturers compile and exchange information which is apparently reliable enough to form a working basis.

In statistics of agricultural yields the situation is often perplexing. We are in the habit of accepting government figures on this score with the implicit faith that they are synonymous with actual yields. Whether they are or not, nobody knows, for the simple reason that these figures are obviously the result of estimates and not of actual counting, since the latter method is clearly impracticable. The yields of corn, for instance, in any state or in the entire country are based on certain estimates of the condition of the crop and the yield per acre. These estimates are thus the results of mathematical equations in which the accuracy of the factors in the equation cannot possibly be determined, since they are based on the estimates of human beings. There is no other practicable way of preparing and rendering such statistics. And the criticism, therefore, is not on the intent and purpose of such estimates but simply that they must be taken for what they are, and not with any false idea that they are, even at best, more than approximations of the actual facts.

Hence the first point in using statistics is always to ascertain as far as

possible the extent to which they are at least approximately correct and complete. The question of their completeness is usually far more important than their accuracy. For statistics may be, and often are, close enough to facts to serve our purpose, but the danger is that they may be only partial and thus give an entirely false basis for action. As a matter of practicable business, only a very small part of the facts in any situation can be reduced to figures. To illustrate, let us take two cases very much in point at the present time—first, the present slump in business, and second, whether the farmer is holding his grain because of prevailing low prices.

The present slump in business apparently is due, more than to any other one cause, to the cessation of buying on the part of consumers because of unduly high prices. No statistics are available which express this truth in anything like its entirety. Scattering reports come from department stores and mail-order houses in some large cities which tell of greatly reduced percentage of sales, but they are partial and local and fail utterly to give any true index of the situation. However, there is a means of getting this information and to be sure of it, and that means is through the traveling salesman and the dependable and complete story he brings from thousands of retail dealers throughout the country who are in constant contact with the ultimate consumer and know his ways and his method of buying. The next question is: How long will the consumer persist in this attitude? Obviously there are no figures to answer this query. But it is possible to learn from these same traveling salesmen that the ultimate consumer will probably begin to purchase more freely when he feels that prices have reached a more reasonable level.

The second important problem is as to whether the farmer is holding his grain—especially wheat and cotton—because of his dissatisfaction with prevailing low prices. You can get daily, weekly, and monthly receipts at primary points, and, by comparing them with the same figures of last year, think you have a line on the situation, but such a comparison is very apt to be wide of the mark. The receipts at primary points tell the story faithfully so far as they go, but they do not tell it all, especially as to the grain the farmer is hauling to the nearest elevators and the nearest flouring mills. Moreover, there remain the questions of transportation service, of elevator capacity, and receipts, of the present condition of the roads over which the farmer hauls his produce to market, and whether the farmer is too busy with necessary farm work to come to town; and no general and reliable figures can possibly be obtained for any of these things.

A concern having extended interests in an agricultural section is therefore completely at a loss as to how it shall handle its sales and collections in such territories if it depends only upon statistics for its information and guidance. It is a different story, however, if it has a network of salesmen who cover these sections and upon whom it can always depend for complete and reliable information. It is in situations like these that the most vital need, as always, is to know the trend of thought among the great mass of the people. Hence the statistician must possess some knowledge other than that of figures—he must have had personal contact with the people in the section under consideration, and he must have human understanding of and sympathy with them and their ways of thought; also he must exercise first-hand observation of the country

and of its resources and possibilities. Otherwise, if he is of that tribe who seldom stir from their fastness in the remote great center and draw their conclusions from figures only, especially those of money and finance, he is merely deceiving himself and his readers as to what is going on in the real world beyond his ken. The true purpose of statistics is to crystallize in concrete form such information as cannot otherwise be definitely visualized, so that the nature, extent, and value of such information may be brought clearly before us. Moreover, statistics enable us to make comparisons from time to time and thus draw to our attention those changes going on from month to month and year to year which might otherwise escape notice.

By the use of statistics, for example, we can get very definitely the nature and extent of the products and resources of any state. Taking Illinois, for instance, we can learn from the figures that it has extensive coal deposits and some large oil fields; that it is one of the principal producers of Indian corn in the United States; that it raises much in the way of small grains, of feed for live stock, of fruits and vegetables; that it is a great dairy state; that it is full of all sorts of manufactures; and that it has much live stock. On the other hand, we will learn that it is not much of a lumber state, nor of many nor extensive mineral deposits other than coal. To these figures must be added the knowledge of the location of these industries and their extent and value. The dairy industry is mostly located in the northern half of the state. That also is where most of the corn is grown. The southern section produces most of the fruits. The practical application of these figures and this knowledge is in its relation to one's business. If it be

a selling proposition, then it is a good place in which to sell dairy supplies, coal-mining supplies, and tools and machinery for all manner of manufactures. But it is not especially attractive for the sale of lumbering tools and cross-cut saws as compared with more forested states. It is also gridironed with railroads, and they are large consumers of many commodities. But beyond all these there are factors in the growth and development of the state for which figures are not always available. Moreover, the figures which are available are not always conclusive. Such factors are the widespread interest in education, indicating an intelligent and progressive people, and the existence of a large class of well-to-do intelligent farmers, who add much to the prosperity and stability of the commonwealth.

The statistician who is studying the state for its present tendencies and future likelihoods must have a wide-embracing comprehension not only of the state and its possibilities in industrial life, but also of the people themselves and the general drift of their thought. If it is books which are to be sold, where is the best market? Is it in Chicago, or in the many smaller cities and towns? Has the southern or the northern part of the state the greater proportion of readers? To answer these questions we must gain a thorough personal knowledge of the ways and customs and modes of life of the people in every section of the state.

Again, is it a state where musical instruments should find a ready sale? Are the farmers given to buying the latest improved farm machinery? Do they want all modern comforts and conveniences in their homes? Are they likely to build more good roads and consequently buy more automobiles? Will they use oil stoves because of the oil fields, and coal stoves because

wood is not so plentiful, especially in the northern section?

These and a thousand other questions can be solved only by intelligent first-hand study. Statistics tell of the great wealth and resources of the state, and hint at the intelligent nature of the population. Thus they disclose great possibilities. But they can go no farther. How the state will develop, what its people will do, are problems which can be solved only by knowing the people themselves. There are no figures which can help you to that information. Again, statistics by their changing figures often bring to your notice an evolution, sometimes a revolution, in the industrial and agricultural life of a section or a state which often foretells a profound and far-reaching change. You see, for instance, figures which show increasing shipments of live stock from Mississippi to northern markets; of more wheat and corn and alfalfa raised there than formerly; of the gradual falling off in sales of certain old-fashioned articles formerly much used in the state, and the growth in sales of up-to-date articles more adapted to modern ways and times. The figures have given you the cue. It lies with you to finish the sentence. For these statistics indicate clearly a steady advance in education, intelligence, and wealth among the people. They indicate that the people are fast abandoning the ways and customs of their forefathers and taking on newer things and newer methods, are substituting diversified farming for one crop agriculture, are abandoning provincialism and taking on the broader ways and more progressive methods of modern life.

Statistics, therefore, are not to be taken on faith as things of infallibility in themselves, but are to be carefully studied and examined for their possible errors and for their true meaning.

JOB ANALYSIS AND THE EMPLOYEE

BY WILLIAM O. LICHTNER*

THE purpose back of job analysis from the administrative standpoint is to get facts about the business. Very few companies since the time when the owner himself did all the work on each and every article he manufactured know the true facts about the business which they are assuming to direct.

What captain of industry would risk his own life, to say nothing of assuming the responsibility of the lives of others, and go out to sea as the captain of a ship if he knew as little about navigation as he does about his own business? Would he, as he now does, let his crew run the ship in accordance with their ideas, traditions and superstitions, acquired, no doubt, from practical experience? A ship without a clear-sighted captain knowing all the facts in regard to exact location of shoals, sand bars, etc., would be almost certain to meet disaster, or at least have a narrow escape. Many a business has experienced similar danger but has been fortunate enough to brave the storm.

Now that days of competition are here again after several years of enforced rest, it behooves those who expect to survive to learn the facts about their own business. Only in this way can competition be met successfully.

Facts cannot be collected over night, nor can they be got together at a round-table conference of the practical men of the organization from the superintendent down to the foremen. The plan to get from a superintendent, who came up through the ranks, a

written statement of the facts in the actual manufacturing of the company's product has been tried many times. Invariably it is found that the superintendent is hardly able to set down enough facts to fill six typewritten pages. Even this information when being verified by what is actually done in the factory may be found erroneous because of changes by foremen or workmen. The foremen are closer to the work than the superintendent, but they in turn leave many things to the workmen.

To determine the actual facts, which means separating them from trade traditions handed down from father to son, workmen's superstitions, etc., it is necessary to make a systematic job analysis for the purpose of:

1. Standardization of jobs,
2. Correlation of jobs,
3. Determining the job's relation to routine work through office or factory,
4. Determining its relation to salary policy,
5. Determining its relation to employment—
 - a. Hiring
 - b. Training

II

A job can be standardized by means of a detailed analysis. To analyze anything means to break it up into its fine divisions. Thus it is possible to see whether all divisions or parts are really necessary or whether they can be made to go together better and easier in some other combination.

Where two employees work on the

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same kind of job an analysis of each will show where one workman does his work differently from the other. This in turn will make it possible to combine the best practice of one workman with the best of the other, in a way that is better than either. This in turn may bring forth from the workman other possibilities which under the old method would be impracticable. Thus a standard can eventually be developed to do the job the best way. This standard is stable, since it is based on facts. Similarly standards should be worked out for other jobs in the industrial plant.

The function of such analysis does not end with the standardization of jobs but it also perpetuates such standardization. To secure this effect it is necessary to put the standardizations in concrete form with full instructions as to their use and application. Copies of these instructions should be placed in the company's file, the executive's file on his desk, the superintendent's file. A copy should also be posted at or near the work place or machine of the workers. Furthermore, these standards must then be followed implicitly and new employees instructed in accordance with them.

Every manufactured article is usually made by converting or fabricating some raw material or materials by steps or stages. The amount of work done at each step or stage is generally limited by the kind of work to be done by a machine or workman. In modern industry of large production the kind of work done by one machine or workman is very much smaller than in former years. Then a workman completed the article from start to finish. Each step or stage, which is known as a job, bears a relation at least to the job immediately preceding and the job following it. Often it bears a relation to practically every job performed in the

factory. Each individual job, therefore, before the standards can be finally set, must be considered in relation to the other jobs so that there is a perfect correlation of all the jobs. A moment's reflection, to look at the matter from this angle, will show the necessity of perpetuating these determined facts and of insisting that the workmen adhere to them.

III

Through job analysis every job in the factory can both be standardized and correlated with every other job. This is made possible through fixing facts which can then be properly codified, classified, and made available for the executive and the workman so that both are in a position to work as a team.

The executive can know exactly what the factory can turn out and what is physically possible for it under existing conditions. He will no longer blame his workmen for not getting out work in the quantity he desires or for not meeting some impossible short date delivery when he himself is to blame for booking orders which either so congested some one department as to make it physically impossible to produce the desired quantity or which required a lot of extra "fussy" work to meet some specific whim of a special customer.

The workman can in a like manner know exactly how to get the maximum out of his job. He no longer needs to complain about the exorbitant demands of the executives when in many cases he himself was blind to the real facts concerning the job, of which he was supposed to be the master.

The information codified and tabulated by job analysis can be utilized by the office on estimates for getting orders on close bids and for routing the

work through the office and the factory. It leaves the factory free to execute the work with dispatch.

IV

Salaries paid in different jobs whether in the office or in the factory are often very unjust. This condition is due in many cases to taking care of the exigencies of the moment. Job analysis, in its hunt for facts, uncovers the many known and many unknown reasons why some workmen in very simple jobs which do not require particular skill or involve much danger to life or limb get comparatively large salaries while others on very difficult or practically dangerous work get small salaries. Job analysis compares the various factors of each and every job and thus makes possible the establishment of a salary policy which is equitable and fair to all jobs.

The employee, being human, and not working for his health, is most interested in the amount of money put in his pay envelope at the end of the week. His next interest is the amount of work required to earn this pay. With these two factors before him—in addition to other factors not so tangible and of varying importance with different men—he believes he is in a position to decide whether or not the proposition interests him. He naturally also compares the amount of skill and effort required and the amount of pay he can earn on his job with the requirements and earnings for the other jobs in the same factory and vicinity.

The employer as well as the employee has these same interests at heart, namely, to have an equitable adjustment between: (1) the amount produced vs. the cost of producing (which includes wages), and (2) the earnings of the employees in accordance with the difficulty of the operation.

The employer is anxious that the employee should receive a share in the increased production, where this is brought about through the combined efforts of the management and the employees. He realizes the justice of paying the employees in proportion to the requirements—danger, monotony, application, experience, etc.—of their work.

V

Job analysis in its hunt for facts is not only interested in the facts concerning the materials, tools, equipment and the machine, but facts concerning the workmen themselves. Some workmen are working at a particular job just because that particular job was open when they applied for work. The natural result of such a system is that some of these workmen are misfits. Their work becomes a drudgery. With the proper specifications of the requirements for each job developed through job analysis the employment department is then in a position to hire and inspire workers with qualifications more closely fitting the work required.

New employees put on a certain kind of job become poor and inefficient workers when turned over for instruction to some experienced workman who happens to be on the same sort of job. The experienced workman is not particularly interested in teaching another workman when by so doing his own production is curtailed. This is especially true if the older employee is on piece work and the time given to teaching means that he gets less money in his weekly pay envelope. Even if the experienced workman is on day work and is willing to help the new workman he may not be able to convey his ideas to another. Therefore job analysis brings out the necessity of establishing a competent training staff

which will take each new workman and intelligently instruct and work with him until he can accomplish both the quantity and quality set by the standard.

The relation of the employee to his work is very naturally altered by job analysis. His manner of performing the job, the kind and amount of work expected of him, the training he is given and the wages he receives—all these things he naturally feels concern him just as much as they do his employer. When they are bettered his job is improved. He naturally watches job analysis very closely to see in what way it is going to change his job and whether it is going to increase his work, or make it easier to do, and how it is going to affect his wages.

The average workman when spoken to about job analysis, even though he never heard the phrase before, instinctively fears it. He may be afraid of it for a number of reasons, *all of which are due to lack of understanding of the results at which job analysis is aimed.* Many employees after working a number of years at some particular job work out short cuts and improvements which may be made through a desire on their part to make their work easier or to correct some fault, *e. g.*, poor quality, for which they have been blamed by their superiors. Often it is found that even foremen directly in charge of workmen are not aware of the changes made by the workmen or that everyone on the same job does not do the job in exactly the same way. This is not a hypothetical case and, sad to relate, is more apt to be the rule than the exception; as has been shown most forcibly through instituting job analysis.

VI

Many employees realize their position and naturally resent being asked

about the details of their job or having any records compiled. They feel that any short cuts or secrets they know are their stock-in-trade which make their services of greater value to the company and which gives them a certain hold on the company as well. Such is the attitude of the skilled workmen. Any workman who is ingenious enough to devise ways and means of making his job easier, or who, when left to his own devices, has taken care of it satisfactorily, should be given consideration for what he has done.

Other workmen may be afraid of job analysis because they have heard from a fellow workman, about its having been done somewhere else, to the harm of the employees. This report may be due to some injustice done through the improper application of job analysis or merely come from some poor workman who felt aggrieved when his shortcomings were brought to light.

There is still another class of workmen who see the justice of job analysis and still have an innate resentment against being labeled, numbered, and filed. This is a natural resentment and would be justified if it were true that job analysis imposed upon the workman a cold and purely mechanical device that ignored the human factor.

Job analysis, contrary to the impression of many workmen, is a benefit and not a detriment to the worker. Often it is an education to an employee by lifting him out of the rut of work done along shortsighted traditional lines and stimulating his mind to new possibilities not only in his own work, but also in the work of his fellow workmen. It may reach to his own home.

Job analysis benefits the employee in many direct ways; for instance:

1. It determines standards of work expected of him,
2. It simplifies his work and makes it easier to master,

3. It makes him fit more easily into the general scheme of the organization—to become an integral part of it,
4. It increases his wages.

VII

Most employees have worked in factories where piece-work rates were effective, that is, where they were paid so many cents or dollars per hundred or per thousand. The experienced workmen would soon find out which piece-work rates were liberal and which unjust and then so regulate the quantity produced as to be in accordance with the practice established by other employees; or on learning that the company would permit the employees to earn only a certain amount per week, which if it were exceeded would result in the cutting of the piece-work rates, he would see to it that the work he produced did not out-run the rate-limit set.

The standards determined by job analysis are not merely the guess of a superintendent or a foreman, but are the result of a thorough analysis made jointly by the analyst and the workmen on the particular job for which the standards are set. The workmen are therefore a party to the establishment of these standards and can, with the assistance of the analyst and a competent instructor at the start, attain the standard and maintain it day in and day out without detriment to their health in any way. An intelligent understanding of what is expected of the workmen gives them confidence in themselves and makes them feel that what they are doing is right, and this makes possible the achievement of larger production than would be otherwise realized.

Job analysis considers the job in all of its aspects such as men, materials, machine, money, and management.

In modern industry with the development of proper employment methods the danger of having a blacksmith on a watchmaker's job or vice versa is minimized. A study of a job, however, often makes it possible to adapt machines or equipment to individuals, who may, for instance, be either tall or short. Similarly the work of the employee is simplified by furnishing him proper equipment to use, such as high tables or trucks on wheels in place of low tables or wheelless trucks. In some cases the analysis will bring about a standardization of the tools used so that properly designed and sharpened tools will be furnished in place of poor or badly designed tools.

VIII

Among the most flagrant ways in which high-salaried workmen err is that of spending considerable time doing the work of a laborer. Such work consists in going after an empty truck on which to place the finished work, or going after the work itself or getting a broom and sweeping the shavings from around the machine, etc. This is done in many cases through necessity and desire to get work out and not through a desire to curtail work.

Job analysis brings out all these points and arranges the work of the men so that skilled mechanics can be kept on their work. The moving, sweeping, etc., are turned over to ordinary laborers. Thus the work of the employees is greatly simplified.

Through job analysis a standard is set for each variable, whether it occurs in the machine, tools used, or product manufactured. The relation of the employees working on the first job to the employees working on the last job which completes the product is made clear by job analysis. The employee on every job is advised of this rela-

tionship, and thus can see what effect even a small change in method or a slighting of his work will have on the work of the other employees. Hence no employee works in the dark. No wonder, therefore, that before job analysis is instituted individual employees are not in a position to co-operate effectively with the management in suggesting practicable improvements. On the other hand, after job analysis has been made, every employee is in a position to offer valuable suggestions for as he is an integral part of the whole organization, and not merely an individual, he can weigh the result of his suggestion before making it.

IX

Conditions affecting the employee's work may be changed so as to make it more interesting from the various angles just mentioned, but all this will be of no avail and interest in his work will not be lasting unless the employee is satisfied with the financial return. Standards set by job analysis require each employee to do his part correctly and with dispatch, which makes for team work. This eliminates the many small losses usually occurring in a plant which if they could be figured in dollars and cents, would reach a surprising amount. The company therefore, which has had the advantage of job

analysis can and is only too willing to pay its employees better wages than its competitors who have not had such advantage.

By way of conclusion it may be said that job analysis represents a big benefit to the employee as well as to the management. It should not be hard to make the employee see this benefit. Indeed, it will be comparatively easy to make him see it, if job analysis is effected in the right way—that is, as described in this article. If it is effected with, and not in spite of the employee his co-operation can be won on the one hand by dissipating his false fears, and on the other by showing him clearly what he gains. The purpose of job analysis should be explained to him to win his confidence. He will then see that job analysis, far from working him an injury, is calculated to do him a positive good, and that the results he is seeking in his work will be brought about more easily and quickly.

As soon as these beneficial results are produced he will know from actual experience, that job analysis, by giving him definite standards, by simplifying his work, by showing him his place in the organization, and by increasing his output and pay, is one of the most beneficial devices that could possibly be used not only for the management but also for the employee.

REVISION OF THE EXCESS PROFITS TAX

BY MILTON RINDLER*

AMONG the important questions to be presented at the spring session of Congress for solution, the tax situation assumes a foremost position. Business men throughout the country anxiously await the decision of Congress either to repeal or to retain the excess profits tax. The repeal of this tax is strongly urged by many business men. They contend that it is uncertain, complex, unfair and a restriction on business and that it is finally passed on to the consumer in the form of higher prices. A substitute is proposed in the form of a tax on sales.

Of those who oppose the repeal of the excess profits tax, there are few who do not admit it has defects and inequities. They believe, however, that a revised excess profits tax will satisfy the need for high revenues more effectively and more equitably than any substitute thus far suggested. They point to the fact that Great Britain, instead of repealing its excess profits tax, is considering its retention as a permanent measure. The contention that the tax is borne by the consumer is denied in the following reported statement by Dr. Robert M. Haig of Columbia University:

In a competitive situation, a business man will ordinarily charge as high a price as his competition will permit. In a case where the seller has a monopoly of the supply, he will charge the price which he thinks will yield the largest return. A tax which falls upon profit, or excess profit, does not enter as a necessary expense of the marginal competitor, and therefore would not be expected to affect a price competitively arrived at. A profits tax in the case

of a monopolist would hence serve merely to reduce his net profit, for he has already determined his price at the point of maximum return and the tax does not affect the location of that point.

Dr. Haig also goes on to note that prices rose in this country in the years prior to the passage of the excess profits tax and that the large decrease in Great Britain's tax last year produced no perceptible effect on prices. A sales tax, on the other hand, is a direct addition to cost and is easily passed on to the consumer.

Many of the objections to the excess profits tax can be overcome by a revision of the law and improvements in its administration. It is the purpose of this article to point out some of the principal defects and inequities of the law, together with suggestions for their elimination or correction.

One inequity should be discussed before all others because of the need for its immediate correction. This inequity arises as a result of the lack of provision in the present law for inventory and net losses sustained during the year 1920.

Congress in passing the excess profits tax law on February 24, 1919, anticipated a reconstruction period directly following the war. History shows that immediately after other wars a readjustment of business conditions to a peace-time basis took place, causing a period of business depression. Congress prepared to meet this condition by recognizing a loss which during the period following the ending of hostilities occurred as an outcome of war conditions—hence, an offset to the income earned during the last year of the war.

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Two provisions in the law show the intent of Congress.

Section 234 (14a) provides:

At the time of filing a return for the taxable year 1918, a taxpayer may file a claim in abatement based on the fact that he has sustained a substantial loss (whether or not actually realized by sale or other disposition), resulting from any material reduction (not due to temporary fluctuation) of the value of the inventory for such taxable year or from the actual payment after the close of such taxable year of rebates in pursuance of contracts entered into during such year upon sales made during such year. . . .

Section 204 (b) reads:

If for any taxable year beginning after October 31, 1918, and ending prior to January 1, 1920, it appears upon the production of evidence satisfactory to the commissioner that any taxpayer has sustained a net loss, the amount of such net loss shall . . . be deducted from the net income of the taxpayer for the preceding taxable year; and the taxes imposed by this title and by Title III for such preceding taxable year shall be redetermined accordingly.

In explanation of the foregoing provisions, the United States Attorney General said:

The Revenue Act of 1918 was not, in fact, passed until February, 1919. During the time that it was under consideration by Congress, the armistice had been signed. There were many individuals and corporations in the country conducting business requiring large capital and dependent in large measure upon the continuation of the war. It was, therefore, obvious when the Act was passed that much property—such as plants, buildings, machinery, and equipment valuable for war work—had been at once greatly reduced in value by the signing of the armistice. It was also evident that business, profitable because of the war, would in many instances be conducted, if at all, during the following year at a loss. Congress apparently felt that persons and corporations so situated should be given some relief.¹

It is well known that the period of adjustment did not fall in 1919, as Congress expected, but in 1920. The year 1919, on the contrary, was a profitable year and taxes were high. The mistake of Congress was not corrected by an extension of the provisions recited above to include the year 1920. Instead, the government proceeded to collect huge taxes on 1919 incomes from corporations which were being forced to the wall by the general depression and the shut-down on credit. On account of the credit situation businesses were forced to turn their stocks into cash at any price in order to meet their tax obligations. Had these taxes been abated, many concerns might have been able to withstand the strain which in several cases caused bankruptcy.

As an immediate correction of the law, Sections 234 (14a) and 204 (b) of the 1918 law should be extended to include inventory losses and net losses which occurred during the year 1920. The fact that this would probably result in large refunds and cause inconvenience to the government should not affect the decision to correct a great injustice.

As a general provision for future taxation, it seems only fair that the provisions of the two sections just mentioned be made permanent, to be applied to every year in the future. The determination of net income in periods of twelve months each is merely the result of the need for a fairly accurate calculation of what the business is earning annually. However, this calculation is, in most businesses, only an estimate, because there remains at the close of the year an inventory, the value of which may be very uncertain. At the end of one year a business may show a net profit, calculated on the basis of an inventory taken at cost or the lower market value obtaining at that time. If during the second year the market

¹ Bulletin 30-20-1087.

falls and the business realizes on the previous inventory much less than its estimate, it is only equitable to adjust the estimate to the actual, and allow the inventory, loss. Likewise, if a net loss is sustained the law should allow it as an offset to previous and succeeding years' incomes. During the year 1920 the corporation reporting on a fiscal year basis was in a position to offset 1919 gains with 1920 losses, whereas the corporation reporting on a calendar year basis sustained net losses and in some cases paid the tax of the previous year out of capital.

Further relief should be granted by the government to businesses which find themselves financially embarrassed. If a corporation finds that without serious loss it cannot meet its next instalment of taxes, it should be permitted to file a claim for abatement, extending payment (for no longer than one year) with interest at, say, 10% per annum. The corporation which had sustained a loss for the year could then turn these claims covering the several instalments into one claim for the exact amount of tax to be abated as a result of its net loss.

One of the principal objections to the excess profits tax is the fact that it discriminates between different forms of organization. Thus, under the present law, partnerships and individuals are not subject to excess profits tax whereas corporations (except personal service corporations) are. A further distinction should be made between the ordinary "close" corporation and the "open" corporation. The former has been termed an "incorporated partnership" inasmuch as the stockholders are few in number and all or most of them are actually engaged in the conduct of the business. Such corporations are of the same nature as personal service corporations except that they necessarily employ capital to

produce income. Aside from the legal aspect there can be no reason for treating the "close" corporation differently from the partnership. In both the income may be attributed to the activities of the owners in conjunction with the capital invested. Just how much of the income is a return on capital and how much represents compensation for personal efforts can only be estimated and then without any proof of accuracy.

In the case of close corporations the government has attempted to determine the compensation due the officers. This has resulted in differences of opinion between the government and the taxpayer, with neither side able to show proof of the accuracy of its estimate. For this reason the application of the excess profits tax to these corporations has not been very successful.

In addition to the "salary question," the government assumed an equally difficult problem in its efforts to decide which of the close corporations were exempt from excess profits tax on the ground that they were personal service corporations. The income of a personal service corporation, according to government regulations, is to be "ascribed primarily to the activities of the principal owners or stockholders" and the employment of capital is unnecessary or incidental. The application of the fine distinctions laid down by the Treasury Department works great hardship on the corporation which comes very close to being a personal service corporation, but which cannot be so classed under the regulations. In most of these cases the tax based on invested capital is very unfair and is justly protested by the corporation. As a relief Section 328 is usually applied, but even this is far from a fair solution of the case. These questions have placed a great burden on the Treasury Department and have cost both government and taxpayer additional ex-

pense and inconvenience without producing satisfactory results.

The present law has been the sole cause for numerous changes in the form of organizations. The difference in taxation has led to reorganizations of individuals and partnerships under the corporate form and to the dissolution of close corporations for the purpose of forming partnerships. There comes to mind one organization which changed its form three times within the last three years merely for the purpose of avoiding a heavy taxation. Thus, if the law remains unchanged, those businesses which can adopt either the partnership or the corporate form of organization, will finally adopt (leaving other conditions out of consideration) the form which bears the lighter tax.

The remedy for this situation is to treat close corporations in which the stockholders are actively engaged in the same way as partnerships and personal service corporations are now treated—that is, exempt them from excess profits tax. It will then be necessary to tax the individual stockholder on his distributive share of the net income of the corporation, whether or not actually distributed.

It may be assumed that the partnership and the close corporation tend to adopt the form of organization which pays the lower tax. Then the suggested treatment of close corporations cannot produce a materially lower revenue than the present treatment produces. This suggested revision of the law would eliminate the "reasonable salary" question and the personal service question, both of which have caused dissatisfaction with the present law. The elimination of these questions will greatly reduce the complexity of the law and the uncertainty of the original tax computation.

Ordinarily the close corporation can be easily distinguished from the "open"

corporation. Close corporations might be generally restricted to those corporations in which the stockholders are few in number (usually no more than ten) and all, or a majority of them (say, at least 80%), are actively engaged in important positions. However, no definite rule can govern all cases, and special cases would have to be decided by a board of experienced men (such as the Tax Advisory Board, which existed for one year under the 1918 law). The board should be given large discretionary power in order that an equitable decision may be reached in each case.

This would leave the "open" corporation subject to the excess profits tax. This kind of corporation is typified by those corporations whose stock is traded in on the Stock Exchange or the Curb—that is, organizations consisting of a large body of stockholders, the majority of whom take no active part in the conduct of the business and whose only relationship to the corporation is that of an investor. There would also remain subject to tax those close corporations, the majority of whose stockholders are not actively engaged in the business. As in the "open" corporation, the stockholders are only investors.

The excess profits tax can be easily applied to these corporations since in general the net income represents nothing more than a return on the capital invested, all compensation for services having been deducted.

Many people probably foresee a possibility that the Supreme Court may declare illegal a tax on the individual's share of undistributed profits of the close corporation. If this is feared, a graduated tax based on net income might be imposed on the businesses of individuals, partnerships, and the close corporations whose stockholders are actively engaged in the business. At

any rate, the substitute should be a tax which is imposed alike on partnerships and the close corporations mentioned.

The present excess profits tax law imposes a tax on the net income in excess of a fair return on the capital invested in the corporation. Naturally, it is very important that the base of the tax, invested capital, be determined as accurately as possible. As a starting point, the law takes the cash and property paid in to the corporation by its stockholders. To the actual investment is added the surplus and undivided profits up to the beginning of the taxable year. A certain economist has suggested that the investment of bondholders should also be considered as invested capital. This would seem to be a fallacy inasmuch as bondholders are creditors and their investment represents a liability of the corporation. On the other hand, if we disregard legal fiction, a stockholder is a part owner of the corporation; his investment is like that of other proprietors, subject to the risk of the business and represents proprietary capital, not borrowed capital.

In the determination of invested capital, difficulty arises in arriving at the actual amount of capital paid in by the stockholders. In drafting the first excess profits tax law it was found after discussion that the most satisfactory starting point for the computation of invested capital was the cost of the property paid in to the corporation. Thus, using original cost as the basis, the various changes required by law are made in order to arrive at the net invested capital. The use of cost as a basis, no doubt, causes inequities in many cases. However, valuation of all assets as of any particular date can not be adopted because of impracticability.

A corporation which reorganized or formed a consolidation with other cor-

porations, prior to March 3, 1917, using the appreciated values of its assets as the basis for the issue of new stock, gained a great advantage over other corporations. Such a condition may be remedied to a large extent by inserting in the law a provision somewhat similar to Section 331 of the present law. This provision might read somewhat as follows: "In the case of a reorganization or consolidation of a corporation or corporations prior to March 3, 1917, if there is no substantial change of beneficial interest in the property transferred, such property shall be allowed in the computation of invested capital no greater value than would have been allowed the original corporation."

Section 331 of the present law, applying to reorganizations and changes of property after March 3, 1917, where an interest of 50% or more in the property remains in any of the previous owners, is perhaps satisfactory in the majority of cases. Where the interest remaining the same is very close to 50% the application of this section is often unfair. In these close cases the corporation should be permitted to show that the application of this section would be unfair, and the Committee of Appeals and Review should have the power, if in its judgment the facts warrant it, to set aside this section.

The method of determining the deduction for inadmissible assets, namely, stocks, bonds, and other obligations (other than obligations of the United States), the income from which is not subject to tax—is, though not exact, much more practicable than the method used under the 1917 law. Where taxable income is derived from these assets, either by sale or because of the limitation on the deduction of interest under Section 234 (a-2) of the law, a proportionate part of the inadmissible assets is deemed to be admissible. The regulations hold that this provision in the

law applies separately to each issue or class of inadmissibles held by the corporation. It is very doubtful whether this is a correct interpretation of the law. However, under the subject of net income, there will be suggested a new treatment of the income from the sale of capital assets, which should eliminate the necessity for this provision.

Unlike the 1917 regulations, the present regulations disregard the fact that inadmissibles may have been purchased out of current earnings. Accordingly, all inadmissibles are to be included in computing the deduction to be made from invested capital. It is doubtful, after considering all the elements entering into the computation, whether the consideration of inadmissibles purchased out of current earnings results in an inequity to the taxpayer or to the government. The fraction of invested capital to be deducted on account of inadmissibles is represented by a numerator of the average inadmissible assets held during the year, and a denominator made up of the average for the year of the inadmissible and admissible assets, adjusted in accordance with the law. Thus, while the numerator is increased by the average inadmissibles acquired during the year, the denominator also is increased and not only increased by the average increase in the assets brought about by the total earnings for the year but also increased or decreased by the average increase or decrease in liabilities during the year. Ordinarily the corporation gains an advantage in the net result of these adjustments of numerator and denominator unless the inadmissibles acquired out of current earnings form a large percentage of the total current earnings, which is very unusual. However, an inequity arises where a corporation which held no inadmissibles at the beginning of the year, acquires them during the year out

of current earnings. The resulting deduction in such a case represents in reality a deduction of current earnings from invested capital. This is offset in some cases, where dividends are paid after the first sixty days of the year, by reason of the fact that the net available earnings out of which dividends are deemed to have been paid have not been reduced by the purchase of inadmissibles. In this connection it must be remembered that, unlike inadmissibles, that portion of dividends not paid out of current earnings is deducted in full from invested capital as of the date of payment. Hence, as a general rule, the taxpayer does not suffer serious inequity under the present computation of inadmissibles.

To correct the present computation it would be necessary to eliminate from the numerator of the fraction used in computing the deduction, all inadmissibles purchased out of current earnings. In ascertaining the denominator there should likewise be eliminated the assets representing current earnings. Absolute equity would also necessitate the elimination of all assets representing liabilities incurred during the remainder of the year after the acquisition of all inadmissibles. A case in point is the increase in assets brought about by an issue of bonds following which no inadmissibles were acquired. Conversely, the amount of assets should not be decreased by the liquidation of liabilities after the acquisition of all inadmissibles, as for example, the redemption of bonds during the year, subsequent to which no inadmissibles were purchased. The foregoing treatment of current earnings is based on their present exclusion from invested capital. A different treatment of current earnings would alter the suggested computation of the deduction for inadmissibles. It seems, therefore, that the present computation of inadmissibles

does not result in inequities sufficient to necessitate a change to a more equitable but much more complex computation.

It has been suggested that all bonds yielding less than the rate of exemption and assets not used in the business should be excluded from invested capital. Correspondingly, the income from these assets would have to be exempt from excess profits tax. It is claimed that if a bond yields 5%, the difference between this rate and the rate of exemption (at present 8%) results in a further exemption against the excess profits of the business. The excess profits tax is levied, as it should be, on the net return from the entire investment. It is often very difficult to determine whether or not all the assets are used in the business. This difficulty made impracticable the 1917 tax on undistributed profits not used in the business. Bonds may ordinarily be used in the business as collateral or as a sinking fund investment. A corporation, however, which invests in securities the surplus which is not needed in its business is not only evading part of its excess profits tax but is also preventing the imposition of surtax on its stockholders on the surplus withheld and on the profits from its investment. Section 220 of the present law attempts to deal with this situation. In cases where there is a good basis for suspicion that profits are being allowed to accumulate beyond the reasonable needs of the business the burden of proof should rest with the corporation. Detailed balance sheets afford a means of detection of these cases.

The arbitrary treatment of intangibles acquired for stock under the present law results in many inequities. The actual values of assets like good-will, patents, trade-marks, etc., should in all justice be given as much consideration in the determination of in-

vested capital as the actual value of tangible property. But at present, actual value of intangibles is disregarded unless it is lower than 25% of the par value of the total stock outstanding on March 3, 1917, or the beginning of the taxable year, depending on the date of acquisition of the intangibles. For the purpose of income tax, the law has provided for the determination of actual value of all property, including intangibles, as of March 1, 1913. If this is possible, for income tax purposes, it should also be possible to ascertain and allow as invested capital the actual value of intangibles as of the date of acquisition, with restrictions similar to those placed upon the inclusion of tangibles.

Although methods of ascertaining the value of good-will and similar intangibles vary, there is general agreement that the value is to be based upon the earning capacity of the previous owner for a certain number of years. In the absence of a better proof of actual value, the Committee of Appeals and Review has provided the following method of determining the value of intangibles as of March 1, 1913:

Allow out of average earnings over a period of years prior to March 1, 1913, preferably not less than five years, a return of 10% upon the average tangible assets for the period. The surplus earnings will then be the average amount available for return upon the value of the intangible assets, and it is the opinion of the committee that this return should be capitalized upon the basis of not more than five years' purchase—that is to say, five times the amount available as return from intangibles should be the value of the intangibles. . . . In the case, however, of valuation of good-will of a business which consists of the manufacture or sale of standard articles of everyday necessity not subject to violent fluctuations and where the hazard is not so great, the committee is of the opinion that the figure

for determination of the return on tangible assets might be reduced from 10 to 8 or 9 per cent and that the percentage for capitalization of the return upon intangibles might be reduced from 20 to 15 per cent.²

After the percentages which should be applied to net tangible assets and capitalization of intangibles in various classes of businesses are established and the date of acquisition of the intangibles substituted for March 1, 1913, the basis provided by the committee could be applied in the absence of a better proof of actual value. Restrictions would have to be placed on this value as in the case of tangible assets paid in for stock, except in the case of conservative incorporations in which no stock, or only a small amount, was issued for intangibles, because no change of beneficial interest took place. The exact value of intangibles cannot be determined even by this method, but at least the basis used will be less arbitrary and much more equitable than at present.

In addition to the original investment the corporation is also allowed to include in invested capital the accumulated surplus and undivided profits up to the beginning of the taxable year. From this it would be assumed that a deficit must be deducted from the original investment. The Treasury Department has ruled, however, that a deficit arising as a result of operations (not because of excessive dividends), does not reduce the invested capital of a corporation. It seems somewhat inconsistent to hold that if surplus is to be treated as part of invested capital, a deficit, no matter how created, should not be treated as a reduction of invested capital. At present a corporation which has reduced part of its deficit by subsequent earnings is in no better position under the law than one which has increased its deficit by subsequent losses.

Although earnings accumulated prior to the taxable year are part of invested capital, earnings of the taxable year are not. There is no doubt that at least part of the current earnings are used to produce part of the income of the taxable year. The difficulties encountered in determining exactly how much of the current earnings are used as capital makes their consideration as invested capital impracticable. A different treatment of current earnings would give rise to great complexity and affect the computation of various other factors in invested capital.

If capital stock is retired or dividends paid after the first sixty days of the taxable year, the amount to be deducted from invested capital is dependent on the amount of current earnings. The current earnings available for the payment of dividends are represented by the net income as determined for the purpose of income and excess profits taxes, less the accrued federal income and excess profits taxes for the taxable year. The deduction of federal income and excess profits taxes is unfair and inconsistent. The law permits the inclusion of these taxes in invested capital as part of surplus until they become due and payable.³ Thus, for the purpose of determining invested capital, these taxes become liabilities only on the dates they are due and payable. Prior to that time they are part of surplus. However, in determining the net income available for dividends, these same taxes are regarded as liabilities arising during the taxable year. If a dividend is paid during the first sixty days of the taxable year, it is deemed to have been paid out of the surplus at the beginning of the year. This surplus includes the accrued federal income and excess profits taxes for the year, although these same taxes have

² Bulletin 10-20-777.

³ T. D. 2791.

been regarded previously as a deduction from current earnings. Again, the net income as finally determined for tax purposes may include donations or disallowed reserves. The federal income and excess profits taxes cannot be deducted in computing net taxable income, yet these taxes are not treated as other disallowed deductions in computing net income available for dividends.

It would seem, therefore, that for an equitable computation of the net income available for payment of dividends or the purchase of outstanding capital stock, no consideration should be given to the amount of federal income and excess profits taxes accrued.

At present a credit of \$3,000, plus 8% of the invested capital for the taxable year, is allowed against the net taxable income. All income above this credit is regarded as excess profits subject to the excess profits taxes. It can hardly be denied that 8% on capital does not represent a fair return in all businesses. The rate should vary with the nature of the business and the degree of risk involved. It has been suggested that in place of the 8% deduction rates varying from 8% to 15% be adopted. After classification of all businesses a definite rate may be assigned to each class. This would recognize the fact that a fair rate of return in one business may not be fair in another business.

The present rates of tax, namely, 20% and 40%, will probably have to be changed. The new rates can best be determined after the revenue to be derived from tariff is known and any changes in the law have been taken into consideration.

In determining net income subject to excess profits tax the law not only includes income from operations but also profit derived from the sale of capital assets. In one case a liquidating

corporation reported a net income which included profit of \$20,000 on the sale of capital assets. The tax on this profit amounted to approximately \$15,000. Such a tax is certainly unfair. The profit on a sale of capital assets usually represents accumulated appreciation over a period of years and has no relation to the capital invested. These profits should be exempt from excess profits tax but subject to the normal tax and a graduated tax based on the amount of income derived from the sale of capital assets.

Corporate donations, except those representing consideration for a benefit flowing directly to the corporation, do not constitute an allowable deduction in computing net income subject to excess profits tax. During the year 1918 corporations donated thousands of dollars to the Red Cross and to other war activities but were not allowed to deduct these donations on their tax returns. The penalty for their generosity in several cases was a tax of 80% on the donations. Apparently the only reason given for the disallowance of donations is that it would be dangerous to authorize directors to be generous with the money of their stockholders even for such laudable purposes. It would be far better and certainly more reasonable to allow corporations the same limit of deductions for donations as is allowed to individuals under the income tax law, *i. e.*, that they should not exceed in the aggregate 15% of the net income.

Besides these items affecting the net taxable income of corporations, some consideration might be given to the present treatment of the tax paid by a corporation on tax-free bonds, the apparent profit derived from an exchange of property for stock in a case falling under Section 331, and Liberty bond interest. The question of "reasonable

salaries" has been previously discussed in connection with "close" corporations.

In the administration of a law in which general rules are laid down to apply to all kinds of cases, some discretion must be left to the Board which renders a final decision. These suggestions, therefore, have in some cases allowed for the judgment of the deciding Board in unusual situations. The present handling of "relief cases" arising under Section 328 of the law is poor inasmuch as the taxpayer is given very little information regarding the final computation of the tax and is not in a position to appeal from what may be unfair treatment. The treatment of these cases with less secrecy would remedy this situation.

Appeals and special cases can now be taken for final decision only to Washington. The taxpayer would be saved expense and inconvenience and the burden of the Committee of Appeals and Review would be greatly relieved by establishing in the large cities boards consisting of practical and competent men with authority to render final decisions on the special cases arising within those cities.

The excess profits tax law must either be revised or repealed. Congress should give full consideration to revision before repeal can be considered. A law which has proved a financial success without placing a great burden on the ultimate consumer cannot be cast aside until its substitute is shown to be fully as satisfactory.

THE SALES BUDGET FOR BUSINESS

BY J. O. MCKINSEY*

THE first step in the budgetary program is usually made by the Sales Department. The reason for this is easily seen. The object of a business is to make a profit, and sales conclude the process by which a profit is made. Hence, until the sales take place, no profit is realized. Wherever the sales are profitable the executives of a business desire to increase their sales, and, in order to accomplish this desire, they try to co-ordinate all the activities of the business. It follows that the activities of the Sales Department exercise a very important influence over the activities of all the other departments. This influence is of primary importance in both a mercantile and a manufacturing business. It is customary, therefore, for the sales department, within whose scope lies the first step in making the budgetary program, to prepare a sales estimate which sets forth the sales which are desired and deemed possible during the next budget period. This estimate must then be studied in comparison with the future possibilities of the other departments as set forth in their estimates, in order to arrive at a properly co-ordinated budget for the entire business. The revised sales estimate or the "sales budget" then becomes the working program of the Sales Department.

The owners or officers of either a trading or a manufacturing industry of necessity must estimate the probable sales of their business for each season or fiscal period as a basis for the future. In the case of the trading business, the

nature and amount of goods to be purchased depends upon the plans of the Sales Department. In the case of a manufacturing business, the volume and nature of production is dependent on the sales estimated. If a sales estimate is not made by the Sales Department, the probable sales must be estimated by the Purchasing Department or the Production Department; otherwise these departments have no basis for their plans. It is the purpose of the present discussion to emphasize that it is the function of the Sales Department to prepare this estimate and to explain the method by which it is prepared.

It is evident that in a mercantile store, goods must be bought and placed on the shelves or in the warerooms before they can be sold. It will later be explained that in a manufacturing business goods may sometimes be sold before they are produced, but such is not the case in the typical mercantile business. Consequently, in this type of business the management must make estimates as to the volume and character of sales expected for any given period, before the buyers can make contracts and select the goods to be offered for sale. The small retailer whose business is restricted to one particular specialized commodity, say, a dealer in rare oriental rugs, may say that he will buy what he can and plan for the sale of the merchandise after he has it in his possession. But a large retail business, such as a department store, that sells many thousands of different items of merchandise, must set up a program of what sales are expected to be, if purchases are to

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be made intelligently in source markets all over the world and deliveries to the shelves of the store completed before the customers of the store come to buy. Even in the case of the dealer of oriental rugs it is probable that he will learn by experience that certain kinds or types sell more readily than do others. When he makes his purchases, he will be guided by that experience and will seek the popular kinds for his anticipated sales. In so far as he does this, he is estimating future sales. In other words, he is making an informal sales estimate.

Not only do the volume and nature of the sales anticipated, as reflected in the sales estimate, affect the buyers in their selection of goods, but they also vitally affect the operations and plans of the various functional managers of the business. The officers of the store who are responsible for providing proper space for counter stocks, for reserve stocks, and for warehouse stocks must have before them some tangible data as to when such stocks will be purchased, when sold, and what volume of sales will be made. In department stores and mail-order houses, where large stocks are carried, this is especially important. The operating managers must work with an estimate of sales in mind, so that they may secure the proper sales persons and then train them to meet the needs of the organization. Similarly they must anticipate the volume and character of sales to a fairly accurate degree, if they are to employ an economical number of packers, wrappers, telephone operators, delivery men, and the like and train these employees into an efficient working force.

The treasurer or other officer charged with the financial responsibility must have very definitely in mind the volume of revenue from sales that the store may reasonably expect from week to

week, and even from day to day. The owners themselves, or the president or general manager as their agent, must carefully study expected sales in investing capital in new divisions or departments of the store, in making additions or extensions of physical plant, or in deciding with reference to new forms of customers' credits.

A wholesale or retail store of appreciable size must set up a sales program for each season or fiscal period that the customer may receive service resulting from co-ordinated purchasing, operating, financing, and plant maintenance and extension. For instance, in a department store, if the departmental buyers who are purchasing goods in different markets are to work as a unit, they must know not only what volume of sales in their own particular lines they are anticipating by their contracts, but they must also know something of the character and volume of sales expected in all the other lines of the store, so that they may select and purchase qualities and quantities complementary and supplementary to the other lines of goods handled by the store. But the departmental buyers must not only work in harmony with each other; they must work in harmony with the traffic manager, the superintendent of warehouses, and the superintendent of delivery service. The one vital point of contact between the selector of merchandise and the operating man who handles the order for the customer, is that they both premise their work on the same expectancy or estimate as to volume and character of business. It can be readily seen, therefore, that comprehensive and accurate information with reference to sales anticipated is of utmost importance in the internal control and management of a modern wholesale or retail store.

In a manufacturing business the

sales estimate is as necessary for co-ordination of departmental activities as in the case of the mercantile establishment. The production manager must base his production program on the anticipated sales; otherwise excess stocks will accumulate or orders will go unfilled. The plant engineer must plan his building and equipment program to meet the production program demanded by the sales estimate. The Employment or Personnel Department must consider the increased or decreased demand for employees which will result from the program of the next budget period. The purchasing agent must make contracts for raw materials and supplies and schedule deliveries in order to meet the demands of the production budget. The Shipping Department must adjust its capacity to meet the demands of the sales program. The treasurer must know the estimated revenue from sales as well as the probable disbursements arising from the financing of the sales program and the consequent production program. And thus each department of the business is affected by the volume of business, and the volume of business is determined by the amount of the sales. Consequently, a knowledge of the amount of the sales anticipated is necessary in order to plan the operations of the business in such a manner that co-ordination will result, and without co-ordination efficient administration is impossible.

It may be well to state again that it is not intended to imply by the emphasis placed on the importance of the sales estimate that the Sales Department should determine the policies of the business as a whole. The following discussion will show that though the sales estimate is usually prepared originally by the Sales Department, the Sales Department in its preparation should take into consideration the

plans and possibilities of the other departments. In any case the revised estimate, or "budget," which serves as the basis for future operations, is the result of the co-operative efforts of all the functional departments of the business.

II

The sales estimate is a report giving in a summarized but comprehensive form the sales which the Sales Department deems possible during the next budget period. Information of various kinds must be considered in the preparation of this estimate. This information may be classified under the following general headings:

1. Knowledge of general plans and policies of the business. Such information is obtained from the decisions of the executive officers.
2. Knowledge of trade conditions. Such information is obtained as a result of market analysis.
3. Knowledge of the amount and nature of previous sales, as shown by the accounting records. Such information involves sales analysis and comparisons.

In most businesses, plans are made from time to time which affect the sales policies and the volume of sales of the business. A few examples will make clear the importance of such plans in making the sales estimate.

In many businesses there is a special department called by various names, such as Sales Engineering, Sales Promotion, Sales Development, or Sales Research Department, the function of which is to study sales possibilities and to recommend changes in sales policies and methods. As a result of such recommendations new lines may be added; old lines may be dropped; new territories may be entered; new agencies or branches established; new methods of distribution put into effect; changes in prices or terms of sale made;

additional advertising carried on; more salesmen added; and numerous other changes made.

Whether or not a separate department is maintained to carry on such work, such changes are made from time to time by all progressive firms, and the effect of such changes must be given careful consideration in the preparation of the sales estimate. In some cases such changes are decided upon by the chief executive of the Sales Department, but, since they affect to some extent the activities of all the other departments, it is customary for them to be considered by all the functional executives before they are adopted. In some sales policies which will vitally affect the business, it may be necessary for the board of directors to judge if so radical a change as is suggested by the program is desirable. In a business where proper methods of management are followed, the effect of new policies will be estimated before they are adopted. Therefore, it is not difficult to give effect to these policies in the sales estimate.

Although the questions concerning market analysis are primarily problems of the larger one of sales management, they are nevertheless inseparably interwoven with a consideration of budget-making and control. In fact neither market analysis nor sales analysis can be intelligently considered apart from the other. Each serves as a check upon the other. Market analysis shows potential demand, while sales analysis, as reflected in the accounting and statistical records, shows to what extent the potential demand has been satisfied and whether or not it is profitable to try to satisfy it. The purpose of making sales is to gain a profit, but not every demand for goods is one which can be satisfied on a profitable basis. It is the function of accounting and statistics to assist in the deter-

mination of the results of past sales and thus to indicate the probable results of anticipated sales.

To mention all the factors which must be considered in making an analysis of the market in the case of a retail, wholesale, or manufacturing business is of course impossible. The buying power of the community, as reflected in its savings bank deposits; the industrial growth of the community, as reflected in its pay-rolls; the condition of crops and the profits of the farmer and stock-raiser in the surrounding agricultural region; transportation conditions in their relation to the delivery of goods; climatic changes and their effect on seasonable lines—these and many other general and localized trade factors will each have a bearing on the sales to be expected for a retail store. Then the store will have to consider many local factors of importance to itself, such as new buildings and street improvements near the store, fire hazards, relationship of management to state officials with reference to state laws of employment, etc., new forms of taxes adopted or proposed, character of store management, and the like.

In a wholesale or manufacturing business many of the factors above mentioned will have to be taken into account, and, in addition, others of a more general nature will have to be considered. For instance, general industrial and agricultural conditions throughout the territory reached by the retailers or jobbers to whom it sells must be considered. The density and character of the population in both old and potential territory must be considered in deciding on methods of selling and advertising, and in estimating results.

In some businesses it is the function of the Sales Engineering Department, or other similar department, to make

the market analysis and present the data which serves as a basis for the sales estimate. In any case this data must be available, if accurate forecasts are to be made.

At first thought it seems impossible to use accounting reports to advantage in estimating the volume and character of sales. The outstanding fact is that a sales program must be made. Even if the president only hopes to do slightly better this period than the preceding one, the sales program is the result of taking the revenue accounts of the last period with an additional margin of possibly 5%. The directors who ask their officers to "hold your own despite the decline in the market or other conditions," are setting up a very definite standard of performance and accountability. The estimate of sales is based on the actual sales of the preceding period, or periods, plus or minus certain amounts or percentages. This modification is due to a more or less careful consideration of various general trade factors and various trade conditions peculiar to the business itself. In some businesses it is the custom to take past sales and apply a more or less arbitrary percentage in order to arrive at the estimated sales of the following period. This method is unscientific and is usually inaccurate, for it does not take into account trade conditions or changes in market policies on the part of the business, and such changes occur almost continuously in most businesses. It is highly important that past sales be considered very carefully in making the sales program, but it is not wise to follow such statistics slavishly.

Sales accounts tell the owner what past sales have been. If the total sales are credited to one account only, there is still the very valuable analysis by days, and weeks, and months, of cash and accounts receivable gained

by the store through creating sales, although this information may be classified in no particularly convenient form, and so may be difficult to obtain. If a proper analysis of sales is maintained by means of accounting or statistical records, there will be available information not only of value in making the sales estimate, but also of service to the various departmental managers. Although the estimated sales for the current period may be considerably different from the sales of the past period, the departmental managers are usually safe in assuming that the ratio between the different classes of sales, as indicated by the sales analysis, will not vary materially. These analyses are of value to them, therefore, in estimating the effect of the proposed program on their activities. To understand the analysis which should be made, it is necessary to notice briefly the nature of the information which may be desired.

If the problem is to estimate the sales for a retail store for the three months beginning June 1, the first question asked of the accountant may be: What were the sales of last summer by days and weeks? The representative of the Sales Department responsible for the preparation of the sales estimate asks this in order to make an estimate for the current period. The Sales Department, in turn, must answer the question of the amount of sales anticipated for this summer. The merchandise manager asks the question of the Sales Department in order that he may be equipped to fix delivery dates in his contracts with manufacturers and wholesalers. The operating superintendent asks this because he must estimate the number of employees required through the normal vacation period. The treasurer asks this because he must finance the purchase invoices, the store pay-

rolls, etc. Even the finance committee of the board of directors may ask this if they are contemplating certain changes in the financial plans of the company. In addition to this information, each officer may ask for data on last year's sales from the viewpoint of his particular responsibility. The operating superintendent asks, "What percentages of sales last summer were counter sales? What percentages of sales were over the telephone?" The treasurer asks for data as to cash sales, sales on monthly accounts, and instalment sales. The traffic manager asks for the amount of sales to out-of-town customers by express and by freight. These and many other questions of a similar nature will be asked of the Accounting Department, and, in order to be able to answer them, a proper analysis and classification of sales data is necessary. No arbitrary classification of sales data can be given, for the analysis and classification made is determined by the information desired by the various functional managers. But it is safe to say that in planning for the future the officers and managers will desire sales to be classified in some or all of the following ways:

1. By commodity or department.
2. By terms of sales.
3. By method of sale.
4. By method of delivery.
5. By territory of customers.
6. By salesmen.
7. By volume of sales to individual customers.
8. By nature of customers.
9. By rush vs. normal deliveries.

In a manufacturing business a shorter classification may be required. This is due to the fact that it handles and sells its commodities more directly than a trading company. Where goods are sold in large quantities, the problems of selling are less complicated.

In such a business sales may be classified as follows:

1. By commodities or groups.
2. By territories.
3. By salesmen.
4. By customers.

In a manufacturing business the terms of sales, method of sale, and method of delivery are usually uniform. Therefore, no classification to indicate these is necessary.

III

The terms in which the estimate should be made are dependent on the nature of the business and the purpose for which the estimate is to be used. In the past, estimates of sales and purchases and expenses have been made by some businesses for the purpose of financial control only. For purposes of financial control, all estimates must be stated in terms of value; but for the purpose of sales control, and production and purchases control, estimates must be stated in terms of items and not in terms of value only. It would be possible, if a business handled but one commodity and but one size of that commodity, having a uniform value, to make a sales estimate in terms of value, and at the same time control purchases according to the same terms. Or, if the business is not engaged in manufacturing, it is possible to make a separate estimate for each size, if the unit value of the size is uniform, and then control purchases in the terms of value. This would involve the consideration of estimated gross profit in order to convert the sales estimate into terms which are comparable with purchase cost.

In a manufacturing business it is essential that the sales estimate be made in terms of items for production orders or issued in terms of items and not in terms of value. Sales orders are also made according to particular

items of commodities, and, if these items are to be available, production must be planned in terms of these items. A factory may have a large inventory and yet not be able to fill many sales orders, if the particular items called for by these orders are not on hand. To make the sales estimate serve as a basis for the co-ordination of sales and production, it is essential that the planning of sales be in terms of items and not in terms of values or groups or classes.

In most cases the same principle holds true in the case of the retail or wholesale store. A customer does not want a pair of shoes, but *the* pair of shoes of his particular size and shape and fitted to his foot. In order that the merchant may know how many customers want each particular make, size, and style, and that he may procure the goods in advance to meet these demands, it is necessary to have records which will give such information and will furnish a basis for making accurate estimates for future requirements. Thus it is in all lines of merchandise that the demands of the customers call for particular items, and the sales and purchase budgets must be made accordingly. It is of course true that, in the case of goods subject to wide changes in fashion, estimates by items cannot be made so accurately. But even in this case, past statistics will show a fair indication of the customers' demands for different styles and kinds.

The necessity to put sales estimates in terms of items often makes the task of preparing the estimate much more complex. The different items of merchandise sold by some firms run into the thousands. To estimate sales and plan production in connection with each of these items is a very difficult problem. A study of the sales of a firm handling thousands of items will

usually show that the bulk of its sales is composed of a comparatively few items and that the remainder are slow moving items in which the number of sales is few. This may make it possible to select a list of "significant" items which will contain those which constitute the bulk of the sales.

A sales budget and production budget can be prepared in terms of items for the items on the significant list. The remaining items can be grouped by classes and the budgets prepared on them in terms of classes. Although the budgets on the groups will be in most cases unsatisfactory from the viewpoint of co-ordination of sales and production, this is not of so great importance in the case of those items which have a low turnover and are slow-moving, inasmuch as it is not difficult to provide sufficient inventory to meet the sales. Furthermore, by a proper system of inventory control excess quantities can be avoided. For the purpose of the financial budget, the group budget on the insignificant items will usually serve satisfactorily. It is not intended to imply that budgets prepared in terms of classes or groups of items are desirable. It is intended only to suggest that this is one method of procedure when the items sold by a company are exceedingly numerous. If such a plan is followed, it will usually be found expedient to add more and more items to the significant list as the work proceeds. If such a study is begun, it will usually result in the elimination of many of the insignificant items which it will be found are unprofitable and unnecessary. In the end this process will result in the proper budgeting of all items.

IV

As to which particular unit of the sales organization should be respon-

sible for the preparation of the estimate, an arbitrary rule cannot be formulated. In each case the organization of the company and its selling methods must be taken into consideration. In a department store the departmental managers are usually held responsible for the preparation of the departmental estimates. These are combined by the merchandise manager to make the estimate for the entire business. In a wholesale or manufacturing business which employs traveling salesmen, each salesman may be asked to make an estimate of the sales in his territory for the budget period. Such estimates will have to be checked very closely and revised by the Central Sales Office in the light of the data available. In a business which sells its products through branches, each one may be requested to make an estimate of its sales. These estimates, like those of the salesmen, should be carefully checked by the Central Sales Office. When either salesmen or branches are requested to make an estimate of their sales, they should be provided with a record of their sales for one or more past periods in order to use such data in making an estimate of future sales.

Those who favor estimates by salesmen and branches contend that those in closest touch with the customers are best able to judge future demands. There are companies, however, who will not rely at all upon the estimates of the sales force. Instead, they favor the collection of data by the Central Sales Office and the employment of special investigators who make a survey of the sales territory and report on possibilities. Using the data with reference to population, industrial conditions, etc., and the reports of the special investigators, in connection with past sales, they formulate the sales estimate.

If a business has branches which carry an inventory of merchandise, a further complication arises in connection with estimating their requirements, since the amount desired by them from the parent company is dependent not only upon their anticipated sales, but also upon the condition of their stocks. Their inventories may be below normal on some items, and they may show an excess in other items. This condition is especially apt to exist at the time a system of budgetary control is installed. After the system becomes effective, material excesses or shortages in inventories should be eliminated, except in rare cases. Each branch must of necessity report the condition of its inventories for each budget period, whether or not it is held responsible for initiating the sales estimate. Since the sales estimate must be submitted previous to the beginning of the budget period, in order that the production budget or purchase budget may be prepared for use by the beginning of the period, it is necessary for each branch or selling unit which carries an inventory to estimate its inventory at both the beginning and the end of the budget period. This, of course, adds another difficulty to the making of an accurate estimate. To illustrate more clearly the nature of the information which the branch or selling unit must submit, a typical illustration may be given.

The X Manufacturing Company distributes the major part of its product through its branches, but sells some goods to jobbers. The branches make the principal part of their sales from stock which they carry, but take some orders which are shipped direct from the factory. The general sales office submits to the branches forms which are ruled as shown herewith. The first column will be filled in by the

General Office. If the detailed sales records are kept at the General Office, it also will fill in the second column. If these records are kept at the branch, the branch will fill in this column. The remaining columns are filled in by the branch. Column 6 equals the sum of column 3 and column 4 minus column 5. Column 8 equals the sum of column 6 and column 7. In filling in column 4 it is necessary for the branch to have in mind what they call a "normal" stock. This will be stated usually in some such terms as a "Thirty-Day" stock or a "Sixty-Day"

formulate a sales program which is beyond the capacity of the Production Department to satisfy. Consequently data must be obtained which will show production capacity. In order for this to be accurate and comprehensive, it is necessary to obtain data which will show machine capacity. This necessitates the preparation of a card for each machine used in the process of manufacturing, showing the operations performed on this machine and its capacity in the performance of these operations. It is then possible to determine whether the quantities called for

FACTORY REQUIREMENTS
FIRST QUARTER OF 1921

(1) Items	(2) Sales Past Periods	(3) Estimated Sales Jan. 1 to Mar. 31	(4) Estimated Inventory March 31	(5) Estimated Inventory January 1	(6) Amount Required for Stock	(7) Direct Shipments	(8) Total Required from Factory

stock. After the estimated sales for the period are determined, it is only a mathematical process to obtain the estimated inventory at the end. The foregoing illustration is given to indicate some of the problems which may arise in the making of an accurate sales estimate.

V

After the sales estimate is submitted by the unit of the Sales Department responsible for its preparation, it is necessary for it to be studied by the staff officers and revised in the light of their information and judgment. In the case of a manufacturing industry, it must be revised in the light of production capacity. It is useless to

by the sales estimate can be produced. If not, it is necessary to determine which items should be reduced or eliminated.

Another important factor in deciding the desirability of the sales program proposed by the Sales Department is the estimated profit. It is desirable that the profit obtained by the sale of each item called for by the sales estimate be determined, if possible. It is undesirable to produce and sell an article which does not yield a satisfactory profit if it can be prevented. Sometimes it is necessary, because of competitive conditions, to sell certain items in order to meet sales demands for a complete line of articles. For instance, in the sale of valves, dealers find it necessary to carry several sizes

in order to meet the demands of their customers. Some manufacturers produce all these sizes so that other manufacturers, in order to meet the demands of the dealers, may be required to carry a complete line for fear the dealer will place his order with the manufacturer from whom he can obtain a complete line. That a complete line may be maintained, it may be necessary for the manufacturer to produce certain sizes which he is unable to produce and sell at competitive prices without incurring a loss. In the revision of the sales estimate in terms of profit, it is necessary to give careful consideration to the problem of providing complete lines, so that certain items may not be eliminated which will result in decreased sales of other items. On the other hand, the Sales Department has a tendency to over-emphasize the necessity for complete lines, and care must be exercised to prevent the carrying of too many unprofitable items. There is considerable agitation at the present time for standardization. It is to be hoped that this movement will develop and will result in the elimination of many specialties, especially of the kind of goods adapted to standardization. Such standardization will greatly simplify the problem of budgetary control.

In revising the sales estimate in terms of profit, it is necessary to consider not only the profit which has resulted from past operations, but also the probable profit which will result from the anticipated operations. Changes in method or volume of production, as well as changes in method or volume of sales, may materially affect the profit obtained. In order to estimate more accurately the effect of these changes in production or sales, it is desirable to consider the cost of production and selling and administrative expense and the effect of the new program on these items. It is

imperative that careful consideration be given to these factors in the revision of the sales estimate. The sales program must provide for the maximum profit that trade conditions will permit consistent with the permanency of the business. Here is one of the vital points in making over the sales estimate of volume into a sales program. The management must decide not only what increase in business is desired, but also what volume of business can be had at a maximum gross profit of selling price to the customer over the purchase price or cost of production. Consequently, the estimated volume of each line, even of each class and kind of goods, must be re-estimated at the volume that will produce the greatest amount of gross profit. Obviously it is better, from the standpoint of gross profits, to plan to sell \$120,000 of merchandise at 30% gross profit, than it is to sell \$140,000 at 25%.

But gross profit is not the only consideration. Handling cost may more than offset gross profit. There is more net profit in selling \$100,000 of merchandise over the counter for cash at a gross profit of 15% and an operating and overhead expense of 11%, than there is in selling \$200,000 by the instalment plan at a gross profit of 27.5% and an operating and overhead expense of 26.2%. It follows that the re-estimated sales must be gone over again from the standpoint of expense. Sometimes it is difficult to obtain accurate information with reference to the expense of selling different lines or items. When possible, such statistical analysis should be maintained as will provide this information. In some cases the cost of obtaining such statistics is prohibitive. It is then necessary to resort to tests and estimates. From time to time studies can be made, and these may serve as the basis for drawing up fairly accurate estimates,

These estimates, in turn, may be used to judge the profit possibilities of various lines or classes.

In the execution of the sales and production programs, finances are required. There are two ways in which the financial requirements may be considered. After the sales estimate has been revised, taking into consideration production capacity, profits, and the like, the amount of capital required to execute this program may be estimated. If this amount is in excess of what the financial resources of the business will permit, it is necessary to revise the sales program. In making this revision the various factors previously discussed will be taken into consideration.

Another method of considering financial requirements is in connection with the revision of the original sales estimate. The amount of capital required to finance each item of merchandise listed on the sales estimate may be indicated and this factor considered in deciding which items to reduce in case reduction is necessary. In any case, after an estimate has been made of the activities of all the departments of the business, it is necessary to prepare an estimate of receipts and disbursements, based on the departmental estimates, and to revise the departmental estimates, if necessary, to bring them into harmony with a workable financial program.

VI

In the previous discussion the most important factors which must be considered in the revision of the sales estimate have been explained. It should be realized, of course, that no attempt has been made to treat of all the factors which may need to be considered in particular cases. If the sales estimate is considered and re-

vised in the manner suggested, the result will be the formulation of a sales program based on the following:

1. Past sales, as reflected in the sales accounts of previous years.
2. The general plans and programs of the business, as reflected by decisions of the executive officers.
3. Trade conditions, as determined by the study and research of the Sales Department.
4. The judgment of the sales unit or units who make the original estimates.
5. The judgment of the Central Sales Office, which reviews the original estimates and makes such changes as it deems necessary.
6. The production or purchasing capacity of the business, as reflected in the production and purchase estimates.
7. The gross profit-earning capacity of the different lines or items.
8. The selling and administrative cost involved in handling different lines or items.
9. The financial requirements of the program contemplated.
10. The co-ordination of all the departmental estimates into a well-rounded program for the business as a whole.
11. The sales budget, which shows the volume of operations which the Sales Department is expected to perform, based on the budget of the business as a whole.

The process of making the sales program is not a simple one. Rather, a sales program must be thought of as a combination of several estimates. It is a statement of past experience modified by future plans, which are in turn modified by trade conditions.

Many factors have to be considered in determining the proper sales program. In the case of a new business, the ideal sales program may be one that plans for all the sales that trade conditions will permit, the only restriction imposed by the owner being that no line may be handled at a net loss. It is not likely that this will be the sales program of a business once it is well

established. Experience will show that some lines can be handled with greater profit than others, because of the fact that the location attracts a certain class of customers whose general demands are for these profitable lines. Furthermore, certain of the personnel of the store will show greater aptitude in one or more lines. The obvious correction in this case is to strengthen the personnel. Thus, in many ways, the established business may come to have a personality, a policy, a class of trade, a place of its own that can be deflected only by degrees, and this has an important bearing on its sales program.

Since so many factors have to be considered in the formulation of the sales program, it is possible for it to forecast only approximately the operations of the Sales Department. Consequently, the sales program must not be regarded as an arbitrary rule or regulation, or as an unchangeable order to do certain definite things. A real sales program is a statement of profits that seem possible under conditions so far as conditions can be foreseen. The form of the statement is in the tangible and understandable terms of estimated sales, but the purpose and meaning of the program is to arrive at net profit results. If conditions change after the sales program is set up, then the sales program will be changed just so far as the contracts and decisions made under the program can be changed. In order to effect these changes a proper system of reports which will serve as a basis for control of the sales budget is necessary.

VII

The sales budget is a preliminary statement of the anticipated operations of the Sales Departments. Other departments, by means of their budgets,

attempt to co-ordinate their activities with those of the Sales Department, as shown by the sales budget. As the budget period proceeds, it is necessary to take into consideration the variation of the actual operations of the Sales Department from its estimated operations. A comparison should be made at frequent intervals to determine the amount of this variation so that revisions may be made in the sales budget for the remainder of the estimated period, provided that the comparison indicates that such a revision is necessary.

After the revision of the sales budget, it is necessary to revise the other budgets which are affected thereby. For instance, a sales budget may be made for the first three months of 1921, and a production budget prepared to meet the sales program. At the end of January, a comparison may show that sales made are 50% less than the estimated sales, and indications are that a like decrease will take place in February. The sales budget should be revised and the production and financial budgets changed to correspond, if such changes are possible. In some cases commitments may have been made which make a complete revision of the other budgets unpracticable. Some revision is usually possible, however.

In the same manner comparisons should be made in connection with the other budgets, for if radical changes are found necessary in these, such changes may make a revision of the sales budget necessary. For instance, if the production program has fallen down, it may be necessary to decrease the sales budget because of the inability to fill orders.

To make a revision of the sales budget, regular reports should come from the Sales Departments to show what the sales have been. Usually these

reports come monthly. If there are several units of the Sales Department making sales independently of the Central Sales Office, it is necessary to have a separate report from each of these units. For instance, if a business has ten branches, each making sales from its own stock, it will be necessary to have reports from each of these branches showing the sales made, in order that the correctness of the original estimate can be judged and revisions made, if necessary.

In making a comparison between sales and estimated sales, it is necessary to interpret "sales" to mean orders received rather than goods shipped. Otherwise there may be a wide variation between the sales made and the sales estimated which is not due to the fact that the original estimate was incorrect. The goods may not have been shipped because of the failure of the Purchasing Department or the Production Department to supply the goods. If the Sales Department obtained the orders, it has fulfilled its function. In revising the sales budget it is also improper to consider shipments, since it is the orders received, and not the shipments made, which indicate the possibilities for the remainder of the period. In revising the production budget it will be necessary to consider the shipments in order to determine the shortage or the excess existing. In considering the orders received for the purpose of comparing sales with estimated sales, it is necessary to exclude those received for future delivery.

In case it is found necessary to revise the sales estimate because of a falling off of orders, it is possible to determine which items should be reduced, for the orders will be classified by items and the different items will be changed in proportion to the orders received for that item. In case the sales budget

must be revised because of a change in some other budget, such as the production budget, or the financial budget, it is sometimes difficult to decide which items on the sales budget should be changed. Some firms list the items on the budget on a priority basis. In case some items must be reduced due to revisions in other budgets, the reduction is made on the last item on the list. If an increase seems desirable, the first item on the list is increased. The use of the priority list is of more significance in the case of some budgets than it is in connection with the sales budget. For instance, in the case of the plant and equipment budget it is a very practicable method of providing for a revision.

VIII

It is not always feasible to obtain from the formal accounting records all the information needed to serve as a basis for formulating or controlling the sales budget. A considerable part of such information may be obtained from statistical records kept in the various departments, or it may be obtained from a central statistical department. The majority of up-to-date Sales Departments are constantly gathering statistics which will serve as a basis of forecasting future sales. In many cases a special department is maintained for this purpose. These data are useful in making the sales estimate. The Operating Department may keep a record of the method of delivery; the advertising manager may have the sales tickets tabulated in his office to indicate sales by territories. Other officials may record additional data. In many businesses tabulating machines are used to collect the statistical data wanted by the various departments. By means of cards which are punched to indicate various

classifications of data and which are then sorted and assembled, it is possible to obtain various kinds of data. The accounting records can provide useful analyses if these records are properly constructed and operated. One obstacle to overcome is the conception of bookkeeping as a science of formulas for the all important purpose of arriving at net profit or loss. Once a set of revenue accounts is rightly considered as a continuing analysis of transactions there is found no practical difficulty in keeping as many co-equal sets of sales accounts as the making of the well-considered sales program demands.

IX

The length of the budget period is governed by a number of factors. Of these the most important are:

1. The nature of the business with particular reference to the length of its turnover period.
2. The method of financing employed.
3. The market conditions.
4. The adequacy and completeness of the data with reference to past operations.

It is apparent that it is not feasible to make the budget period shorter than the turnover period of the business. In a business where goods are produced throughout the year for sale at one particular time of the year, such as farming machinery, it is necessary to make the budget period one year in length. Otherwise, it is impossible to make any well-balanced program for the business as a whole. The anticipated operations during the sales season determine to a large extent the operations for the remainder of the year. In a grocery business, where the turnover period is short, the budget period will not be more than three months in length.

In some cases the financial peak load comes at a time when it is hard to

obtain funds. Consequently, it is desirable to make financial arrangements some time in advance of this period. In such cases it may be necessary to make the budget period sufficiently long to make possible the determination of financial requirements some months in advance.

When the market conditions are uncertain and variable, it is desirable to make the budget period as short as possible so that revisions in plans can be made more easily.

In a new business or in an old-established one, where adequate records have not been kept, it is impossible to obtain adequate statistics with reference to past results. Hence it is difficult to estimate future operations. In such cases it is better to make the budget period so short that new budgets can be made as statistics are obtained which will serve as a basis for their preparation.

X

The chief difficulties which are encountered in the preparation of the sales budget have been indicated by the preceding discussion. In order that it may not be thought that these difficulties have been disregarded or minimized, it is deemed desirable to summarize them here. They may be stated as follows:

1. Market fluctuations, which make it difficult to forecast future sales.
2. Seasonal fluctuations, which make it difficult to co-ordinate sales with production.
3. Inadequate statistics with reference to past sales, which make it difficult to estimate future sales.
4. Lack of standardization, which results in one firm handling thousands of different items with the consequent difficulty of estimating sales on each item.

Although it is impossible to eliminate

these difficulties, it is possible to overcome them to a considerable extent.

By carrying on proper research work and the collecting of proper statistics, it is possible to estimate market fluctuations to some extent. Of course, in periods of violent readjustments following a panic or a war, it is difficult to estimate the future trend of the market. The only resource then is to make the budget period as short as possible, keep the resources of the business in a liquid condition so that they will be adaptable to sudden changes, gather statistics at frequent intervals to make possible a revision of the budgets, and make these changes as quickly as possible.

Seasonal fluctuations may be provided for in some cases by having seasonal budgets so that the seasonal fluctuations can be provided for each budget period. If it is impossible to do this, it is necessary to plan operations so as to meet these seasonal fluctuations and to make the budgets and budgetary reports correspond. The method of planning production to meet seasonal sales will be discussed in a later article.

Inadequate statistics often present a very serious difficulty. The ques-

tion sometimes arises as to the advisability of attempting budgetary control until more adequate statistics are obtained. Although it may be impossible to make correct budgets on the basis of information available, there is a decided advantage in commencing the budgetary program and developing the statistical records as the work proceeds. By this means the statistics required can be clearly seen and the importance of obtaining them can be impressed upon all those responsible for their preparation. As the program proceeds, statistics can be obtained which will make possible such revisions as are found necessary.

For the purpose of co-ordinating sales and production, or sales and purchasing, the sales budget and the production or purchasing budget should be in terms of items. In a business handling many thousands of items this may be very difficult. It has been suggested previously that one method of attacking this problem is to select those items which represent the major part of the production and budget them. By gradually increasing these items, an adequate system of budgetary control can be developed.

MY LITTLE BLACK BOOK

BY JASON ROGERS*

THE editor has suggested that I describe "My Little Black Book," a simple homespun sort of affair which has enabled me and several score of other newspaper publishers to whom I have shown it to meet the many almost annihilating business problems which we have had to face both during the war and since the armistice. The book can easily be adapted to meet the requirements of almost any line of business.

In advance of this attempt to describe the book and its use I want to confess frankly that I do not know the first principles of double entry book-keeping or accounting, although I have been told by accountants that what I have produced is the very acme of accountancy.

When a boy of twelve working in my grandfather's newspaper office my grandfather kept me amused evenings copying figures into a large book, adding up totals, trying to make the footings tally, and estimating various costs of operation.

The work was very uninteresting for a boy, and little did I then appreciate the value of the training derived from the handling of the figures for equipping me to make good in a large way many years later when opportunity knocked at my door. It was the crudest sort of data compared with the material we can get to analyze as the product of modern intelligent accountancy, and many a hopeless argument I had with my grandfather in trying to convince him that comparative figures reflecting equalization in reference to working days or per issue would be more effective.

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This experience was during the early eighties, but I did not get an opportunity to try out the principles I had worked out for practical use in real newspaper management until about 1906, over twenty-four years later. In that year I was assistant publisher of *The Globe*, which two years before had been created out of the old *Commercial Advertiser*. The business was losing money very copiously. Yet no one in the management was in intelligent communication with real conditions.

Viewed in a retrospective way it seems to me as though the management did not want to know exact conditions, and like much business of those days courage was kept up through occasional flashes of transient success, rather than through knowing the worst and devising processes to produce permanent and lasting success. Very much to the amusement of my associates I started making my own analysis of the monthly figures of expense in a small loose-leaf book, with one page for each item and every item of expense for each department. Each department total was further segregated into twelve monthly pages, with summaries for each quarter, six months, and full year.

I did not at that time have access to the earnings of the business. I went on with my analysis month by month and within two years had the satisfaction of finding that "My Little Black Book" was being constantly used in order to make calculations for the future. I divided every item so as to show cost per issue. Pay rolls which came four and five times a month

bothered me for a time, but when I divided four pay day months by twenty-four and five pay day months by thirty, and used 24, 25, 26 or 27 of these, placing the splits where they belonged, I got fairly accurate results.

The material with which I worked was the monthly report of the cashier. My study was entirely independent of routine office bookkeeping, which to me at least really produced little more than a bunch of undigested figures of no constructive use until unscrambled and made to talk common sense. When later I obtained access to the earning side of the business I opened other pages and summaries for each item, and by going back for a couple of years adduced analyses which gave me a better understanding of the business and of things that must be done to make it successful than any one else in the office.

As subsequent results seem to prove I innocently struck upon a very sound process of cost finding, as it is now called. A few years later, when given the management of the business destinies of the newspaper, I was able to operate the concern with steady progress across the dead line to success. With the cost of manufacturing the newspaper mounting higher and higher with leaps and bounds since 1916, the comfort in possession of a full confidence that I knew exactly where I was at has made "My Little Black Book" worth thousands of times what it cost me in time and effort to produce.

Print paper upon which the newspaper is printed sold for two cents a pound in 1916. Our bill for print paper in that year was \$324,000. In 1920 the price has advanced to six cents per pound, with the cost for the year over \$1,260,000. This item of \$1,000,000 added expense was accompanied by increased costs for labor and other overhead of another million dollars, a

total of better than \$2,000,000 which had to be met by increased earnings to keep afloat. Thanks to the dependability of "My Little Black Book" I have been able to adjust earnings from the sale of newspapers and advertising so as to keep in exact ratio to expense with absolute fairness both to reader and advertiser.

Similar assurance from other publishers who are using the simple system which I have explained to them at meetings and through the trade papers convinces me that there is general merit in the little homespun device, which those skilled in accountancy can further improve.

To show the importance of cost accounting I want to quote from Hurley's "The Awakening of Business" the following three extracts:

Intelligent cost accounting lies at the basis of efficient management. Men go into business to make money. Profit is the difference between cost and selling price. Goods cannot be priced properly unless cost is known. The lack of an adequate cost accounting system in a factory is like the lack of a compass on a ship. It makes it impossible to direct business intelligently and scientifically. At the present time it is estimated that 90 per cent of the manufacturers of the United States are pricing their goods arbitrarily; either upon a basis which will get rid of the goods as soon as they have been manufactured or upon the basis of what their competitors are charging.

...

No item of cost is so important and so frequently ignored as depreciation. The practice of not providing for it is one of the causes of many failures in the business world today. Charging off adequately for depreciation, both for plant and equipment and merchandise, is of vital importance to every man interested directly or indirectly in business. Where this is not done the manufacturer is using cost figures which are too low as a basis for his selling price; the merchant carries his goods at a value

which can never be realized; the banker is furnished financial statements for credit purposes in which inventories are overvalued, and the individual investor is often paid dividends which he thinks come out of profits, but when the crash comes he finds that they actually came out of capital.

The need of making proper provision for depreciation is more imperative today than ever before. Not only is competition keener and the margin between cost and selling price less, but changes in machinery, in the class of goods manufactured, in the styles demanded by the public are growing more frequent and more radical every day. Often before machinery and equipment wear out they are obsolete and useless.

...

Conditions today demand that depreciation be recognized as an element of cost, and that provision be made each month to include it in the costs of that month. If a machine were of a type that would wear out in a month, could any one say that the entire cost of that machine should not be paid for by that month's production? The fact that a machine may be expected to last ten years instead of a month is no reason why every month of these years should not pay its share of the cost of the machine.

...

Another fallacy commonly met with is the idea that depreciation does not exist in plants because they are always kept in the highest state of repair. It is argued that a machine appears and for all practical purposes is as good as new, and that its earning capacity is still unimpaired. Its life, however, is shortening every year, and unless some provision is made for replacement a severe loss is being passed on to the future. Every machine, building, and apparatus, like every man, has a certain period of life, and no matter how much care you take of the machine or how much medicine you give the man, death is bound to come to both.

One of the chief troubles in the newspaper office operated without direct cost system is the ever present inclination of expenses to pile up to high records on every bulge in business. On

a boom in advertising for a brief season every department breaks loose and takes on extra expense, very often without any one noticing it or nipping the waste in the bud.

This was brought forcefully to my notice in going over some figures of expense and income a few years ago. I had set down on a sheet of paper some figures illustrating comparative growth in income and expense for six months of three years:

	Exp. Inc.		Exp. Inc.		Exp. Inc.	
	19—		19—		19—	
July	5+	4+	4+	3+	3—	4+
Aug.	6+	8+	5+	6+	2—	5+
Sept.	9+	10+	8+	9+	4—	6+
Oct.	12+	15+	9+	10+	5—	12+
Nov.	13+	14	10+	11+	2—	11+
Dec.	10+	10	2+	5—	1—	10+

Of course these figures are purely fictitious, but they demonstrate the point I want to make. Notice how in the first two years every increase in income is almost blanked by increases in expenses. Then notice how by the application of the system I am going to describe expenses were held down or reduced in the last year regardless of increases in income.

I reasoned the problem out in this way:

1. Certain expenses not affected by increased volume of business should be placed below an imaginary dead line and not permitted to move upward without complete understanding and authorization.

2. Those departments directly affected by increased volume must, of necessity, swell and recede as business does, and must be controlled by some rule in each for keeping absolute check of costs by units adapted to each.

3. All items of promotional or experimental nature in any department must be kept track of in a lobe extending down below a line drawn across the sheet at bottom of the first group.

Condensation places a higher premium on editorial ability which spells increased efficiency and service to the

reader. To cut an item which ordinarily would occupy, say, ten inches so as to present the essential information in, say, two inches of space is to save just eighty per cent of paper waste, and make more room for additional abbreviated news in the more condensed newspaper.

If one keeps all the promotional, experimental, and exceptional expenses below the base line, and admits nothing to the central group that is not an absolute *must*, and nothing above the dead line except as justified to care for additional business, more than half the usual troubles in a newspaper will be done away with.

Regulated in this way, when a condition like the print paper shortage and inflation of price obtains, one can cut off almost all the expense of promotional or experimental nature below the base line without disturbing regular operations in the least.

If the whole force is brought to a realization of where it stands in reference to tenure—those in the regular groups, knowing that they are fixtures so long as they are effective, and those below the base line only engaged while the special promotional work is on—these latter can be dropped without any more gossip than that the paper temporarily is to drop promotional work.

In many newspaper offices the dropping of any group of men is hailed with rumors that the paper is in a bad way. This happens when temporary positions grow into regular departments, and any cut must affect all departments.

I sincerely believe that for greatest newspaper efficiency there should be a more frank understanding of conditions than usually exists.

The old notion that basic facts regarding the business should be in the exclusive custody of one man and kept dark from all others has gone to the scrap heap.

I know of one very successful newspaper of today conducted so that no man under the roof but the big boss knows what is going on.

There are many such, but most of them are on the skids when forced to compete with organizations representing sounder and keener co-operative effort.

If every department head had the use of the figures represented in the "Little Black Book" he and those under him would be able to shape their efforts to better purpose.

In this article I am attempting to show a set of sample forms, with explanation, by which monthly figures—no matter how produced—can be made to produce results for easy-get-at-able reference, and which may safely be carried in a vest pocket.

Merely to show how we segregate expense items in *The Globe* office, I present (Figures 1 and 2) back and front of one of our voucher forms. The front of the voucher is reduced in size to save space in this magazine.

Every item of expense is made to conform to this standard, the face (Figure 1) showing the amount of any bill or group of bills—for example, a weekly pay roll—with the details accurately distributed on the back (Figure 2). A large sheet, kept in loose-leaf binders, is made to summarize the daily total of all vouchers, while a second sheet summarizes the first voucher summary in a way to get departmental totals.

From this summary I make up a monthly record for my own guidance and find it very useful.

"My Little Black Book" commenced with the treatment of the figures thus produced. I bought a loose-leaf book with rulings like page showing Figures 3 and 4, $3\frac{3}{4} \times 6\frac{1}{4}$ inches. I arranged my figures so as to take a right-hand page for each item of expense reflected in the

summary of expenses. Each item was arranged by total for the month, the number of publication days, and the cost per issue.

Starting with Editorial Expense, my first page in that section was headed "Editorial Totals," with the second page "Editorial Space and Special Articles," and so on.

There are thus twelve pages given to sub-divisions of editorial expense, in addition to the departmental total, nine pages to circulation expense besides the departmental total and a total of seventy pages devoted to such records.

By handling each department in this way, using the alphabetical guides that come with the books for separa-

tion, one can get a basis by which one can gradually build up a set of figures of greatest possible use.

In this connection I would suggest that wherever possible the publisher go back over his figures for a year or two and set them up in the "Little Black Book" for the purpose of producing comparative figures for immediate use.

At the end of each department page I insert four pages for quarterly summaries, two pages for semi-annual summaries, and one for each yearly summary.

To see departmental totals by quarterly, semi-annual, and annual comparison, at a glance, is far superior to the old process of being compelled to ask occasionally the bookkeeper to dig


VOUCHER No.				New York, .....19			
				To ..........Dr.			
Date	Dept.	Detail	Totals	Current Cash	a/c Payable		
		Totals					
		Cash Disct.					
		Net Paid					
Audited by Approved for payment <div style="text-align: right;">Publisher</div>			New York, .....19 Received from THE GLOBE and COMMERCIAL ADVERTISER .....Dollars, \$				

FIGURE 1, FRONT OF THE VOUCHER FOR *The Globe*

out such figures for study and consideration.

In my early use of the figures I was able to estimate monthly and quarterly results which were of greatest possible use in management.

The second section of "My Little Black Book" covers income figures by the same process, with groupings for

"Circulation Income," "Advertising Earnings," and "Miscellaneous."

Here we see all the high spots regarding circulation and advertising.

The group of pages on circulation show the average gross print, net average, expense of circulation department, circulation income, and paper bill, month by month.

DISTRIBUTION		
EDITORIAL		
2. Space Reporting and Spec. Art.....		
3. Correspondence		
4. Illustrations		
5. Press Assns.		
6. Postage		
7. Carfares		
9. Telegraph, Cables and Tickets.....		
10. Telephone and Messengers.....		
11. Stationery and Printing.....		
12. Supplies (Papers, etc.).....		
13. Expenses		
CIRCULATION		
6. Postage, Newspaper		
6. Postage, General		
7. Carfares		
8. Expressage		
11. Stationery and Printing.....		
12. Supplies		
13. Expenses		
14. Wagons		
17. Advtg. Expenses		
ADVERTISING		
4. Illustrations		
6. Postage		
11. Stationery and Printing.....		
12. Supplies		
13. Expenses		
13. Expenses, Classified		
BUSINESS		
6. Postage		
7. Carfares		
11. Stationery and Printing.....		
12. Supplies		
13. Expenses		

DISTRIBUTION		
PROMOTION		
6. Postage		
7. Carfares		
11. Stationery and Printing.....		
12. Supplies		
13. Expenses		
17. Advtg. Expenses		
COMPOSING		
12. Supplies		
13. Expenses		
21. Maintenance and Repairs.....		
PRESS		
12. Supplies		
13. Expenses		
15. Paper		
16. Ink		
21. Maintenance and Repairs.....		
STEREOTYPE		
12. Supplies		
13. Expenses		
GENERAL AND FIXED		
6. Postage		
7. Carfares		
10. Telephone and Messengers.....		
11. Stationery and Printing.....		
12. Supplies		
13. Expenses		
18. Legal		
19. Power and Heat		
20. Light		
21. Maintenance and Repairs.....		
22. Rent		
23. Insurance		
24. Taxes		
25. Interest		
Total		

FIGURE 2, BACK OF THE VOUCHER FOR *The Globe*

EDITORIAL TOTALS				EDITORIAL SPACE REPORTING			
1915	DAYS	PER ISSUE		1915	SPECIAL ARTICLES	DAYS	PER ISSUE
JAN	26	100.00		JAN	7.00	26	100
FEB				FEB			
MAR				MAR			
APR				APR			
MAY				MAY			
JUNE				JUNE			
JULY				JULY			
AUG				AUG			
SEPT				SEPT			
OCT				OCT			
NOV				NOV			
DEC				DEC			
1916				1916			
JAN				JAN			
FEB				FEB			
MAR				MAR			
APR				APR			
MAY				MAY			
JUNE				JUNE			
JULY				JULY			
AUG				AUG			
SEPT				SEPT			
OCT				OCT			
NOV				NOV			
DEC				DEC			

FIGURE 3, PAGE FOR EDITORIAL TOTALS

FIGURE 4, PAGE FOR SPACE WORK

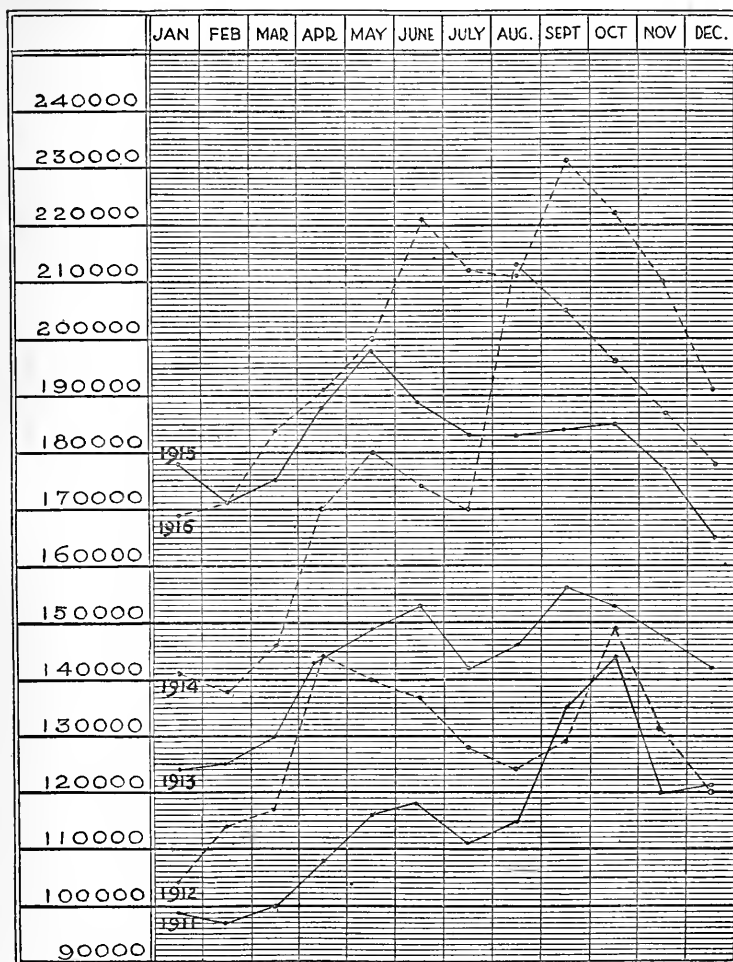


FIGURE 5, GRAPH SHOWING CIRCULATION

In bringing this discussion to a close I wish to urge upon all readers the use of graphic charts.

The circulation graph (Figure 5) gives one a visualization of affairs in a way far surpassing any tabular presentation. The idea can be so used that it will show the amount of material bought or sold in any business no matter what the nature of the transactions may be.

Likewise a chart for volume of advertising space shows the peaks and valleys much clearer than a mass of figures. Any classification of advertising can be shown like the financial or the women's specialty shops in a way that is most convincing and satisfactory. Departmental or other expense can be shown. Paper tonnage can be flashed directly against circulation or advertising and a man gets a wonderful grasp of what is really going on.

In this article on newspaper economies and costing I have attempted to lay down in some detail suggestions of practical use, and a number of business office principles, systems, forms, etc., which I think should be considered as fundamental to the creation of a commercially successful newspaper.

There are those who like to look upon a newspaper as a sort of public service utility for the control and formation of public opinion by bosses, the interests, or philanthropists. Practical experience has shown that no newspaper conducted on such theory has ever approached the maximum possibilities of usefulness to its community open to one run as a business as nearly independent as human skill or training can keep it.

No matter what kind of business one is operating, one should first of all consider costs, business probabilities of the fields, and other important factors before one can know where one is at.

Too many newspapers are being conducted by men who, through ignorance of broad general experience, are deceiving themselves and their stockholders, perhaps by false or impracticable estimates regarding investment, maintenance or returns. There is nothing easier than to ignore selling costs in newspapering the same as in any other line of human endeavor.

After upward of thirty-five years' experience in the newspaper business and investigations of newspaper conditions in nearly all the more important cities of the United States and Canada, I find myself almost a "cost fan." I mean that I have seen such a clear demonstration of ignorance regarding basic costs in newspaper offices that I believe the general use and adoption of cost finding systems would cure most of the ills from which newspapers suffer.

If it cost any more money or effort to produce accurate and dependable cost figures than the mass of valueless calculations one finds wherever business is projected or carried on, that would be one thing that might be urged against it, but it doesn't. Ignorance or cowardice is alone responsible for lack of simple cost figures, which causes more business unsuccess than lack of proper financial resources or lack of skill.

For me, "My Little Black Book" is as useful as the little black satchel which the physician carries.

ACCOUNTING IN DECEDENTS' ESTATES

BY HAROLD DUDLEY GREELEY*

FIDUCIARY office formerly was honorary and its incumbent accordingly received no compensation. The office of executor fell in this category and for many years the practice prevailed of exacting gratuitous service from one who sometimes unknowingly and often unwillingly found himself nominated to it but who for reasons of his own did not feel free to renounce the trust. As an inevitable consequence, when a competent person was by chance selected by a testator, he quickly shifted his labors, and as far as possible his responsibilities, to counsel and even to clerks, for the natural reason that his private business interests could not be neglected for unremunerative labor.

Thus, in the course of time it was seen that to secure the service of competent persons it was necessary to compensate them, and the rule was changed. The office of executor then became and now is remunerative, the compensation generally consisting of commissions at some fixed rate per cent on all assets received and disbursed. "The policy of the law ought to be such as to induce honorable men, without a sacrifice of their private interests, to accept the office."¹

With this change, the law began reasonably enough to make greater demands on the executor and to exact a higher grade of work. In fair sized estates today the office can be filled satisfactorily only by a person of intelligence and affairs. Testators, however, generally select executors for

personal reasons only, with the result that many estates suffer unnecessary losses. It is small satisfaction to beneficiaries to be put to an action on an executor's bond, or against the executor personally, if he gave no bond. In the latter case, a judgment against the executor personally would be of no value if he were "judgment proof." The beneficiaries should not be compelled to resort to lawsuits in order to recover for an executor's mistakes; the risk of loss should be minimized by the selection of a properly qualified person as executor.

On the other hand, the executor may incur a personal loss through misconception of his rights and obligations. Such misconception may frequently be found in peculiar and unusual situations arising in the administration of an estate where the question of whether or not the executor may legally do a thing is usually more important than his method of doing it. However, the executor may suffer a personal loss from errors in his method of conducting the administration. It is a popular mistake to think that all an executor has to do is to receive and disburse money, and at the end of his administration fill out a blank form provided by the clerk of the probate or surrogate's court. Today, as estates are greater in size than ever before and as the work of the executor has increased proportionately, the administration of the average fair-sized estate requires a very considerable amount of legal and accounting knowledge. The necessity for this is emphasized by the fact that the law requires from executors more exact accounting than formerly. This may

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¹Story Eq. Juris, sec. 1268 (n).

be an indication that the rapid development of accountancy is having a perceptible influence upon the law.

In order to provide a comprehensive statement of the legal and accounting requirements in the usual estate, this instalment and others to follow will consider the subject of estate administration from the death of the testator through the final accounting, including the final distribution of assets remaining in the executor's custody. The law of wills will not be discussed, because the execution of wills is without the scope of estate administration. In these articles an attempt will be made to present simple and concise definitions of usual terms and non-technical explanations of all ordinary transactions. The subject is a broad one and it cannot be expected that every situation will be covered, but it is believed that every important principle will be stated and illustrated to such an extent that most of the transactions which an executor may meet can be satisfactorily handled and recorded. Since the work of an administrator is practically identical with that of an executor, what is said concerning the executor and his work may be taken to apply to an administrator.

This instalment will contain chiefly a general description of the executor's work, together with the necessary definitions of the titles and terms involved. There will follow an explanation of a double-entry system of accounts suitable for estates, which will include suggested forms for such books as are not in general commercial use. In order to facilitate indexing and to make it possible to use these articles as a reference work, each subject will be discussed by itself as far as practicable, although a certain amount of cross-reference will be inevitable. It has not been deemed expedient to work out a set of hypothetical transactions,

because estate transactions necessarily occur in chronological order and matters pertaining to any one subject might be found under more than one date. An attempt will be made in dealing with each subject to state the rules of law, the principles of accounting, and the customary practices.

II

Definition of Executor, Administrator and Trustee. An executor is a person to whom the carrying out of the provisions of a will concerning personal property has been confided by the testator in his will and who has been duly approved by the court.

An administrator is a person appointed by the court to receive and distribute the personal estate of a decedent who left no will, or of a testator who named no executor competent and willing to serve.

A trustee is a person appointed by will or deed, or by the court, who holds some estate, interest or power in or affecting property of any description for the benefit of another who is called the *cestui que trust*.

Both the executor and the administrator are officers of the court to manage generally the personal estate of a decedent by collecting his personal property, paying his debts, and distributing the personal property then remaining according to the terms of the will or the provisions of law if there be no will. They differ from each other chiefly in the fact that the executor is named by the testator in the will, whereas the administrator is appointed by the court where there is no will. As will be explained later, an executor may, and often does, manage real property as well as personalty but an administrator holds or manages realty only by order of the court.

A trustee, however, is an officer upon

whom devolves no such general duty, but whose function is to hold and manage for the benefit of another certain specific real or personal property. When he is appointed by a will he is called a testamentary trustee. The functions of executor and trustee are usually separate and distinct, despite the fact that they may be exercised by the same person. They may be so distinct that one who by a will is made both executor and trustee, may decline to act in either capacity without affecting his right to act in the other. On the other hand, the functions may run together so that they cannot be clearly separated and in that event the person acting in the dual capacity of executor and trustee would not receive double compensation.

Definition of Will and Admission to Probate. A will is one's solemn declaration in legal form making disposition of one's property, taking effect at death, but revocable during life. A person who dies leaving a will is known as a testator.

Before the law will give effect to a will the court must approve it as complying with the law. This formal approval is called the admission of the will to probate. The first step generally is to file a petition to the court asking that the will be admitted to probate. All interested persons are then notified that the will will be propounded on a specified day, at which time there is a hearing or trial before the court. If satisfactory proof is offered of the legality of the instrument as a will, the court decides that the instrument offered for probate is a valid will. While it is customary for the person named as executor to propound the will, that is, to offer it for admission to probate, it may be offered by anyone interested in the estate, if such person does not act; for example, by a devisee, legatee, testamentary

trustee, guardian, creditor of the decedent, or any party to an action at law in which the decedent if living would be a proper party.

III

Appointment and Qualifying of Executor. If the person named in the will as executor is one of whom the law approves as to age, residence and character, the court issues to him letters testamentary which are the evidence of the court's approval. They are usually contained in a printed form which recites that the person has been appointed executor. Before the issuance of the letters the executor is generally required to take an oath of office and he may be required to file a bond for the faithful performance of his duties. The circumstances under which a bond is required vary in the several states. It frequently is possible for a testator to relieve the executor from the burden of filing a bond by specifying in the will that no bond need be filed, but such a provision does not necessarily bind the court, and in many cases bonds have been required notwithstanding the expressed intent of the testator to the contrary. In some cases the form containing the letters testamentary recites extracts from the statutes of the state giving much useful information concerning the administration. The executor should very carefully examine such extracts in order that he may understand in general the duties devolving upon him. Regardless of the size of the estate, competent counsel should invariably be secured, but even with the assistance of counsel, the executor personally should be well informed concerning his legal rights and obligations. Incidentally, executors in the larger cities of the country can secure from various banks and trust

companies without charge pamphlets containing information concerning the administration of estates.

Sources of Authority. The executor's authority originates in the will and is confirmed and transmitted to him by letters testamentary.

The administrator's authority, as defined by the laws of the state, comes directly from the court since there is no will from which he can derive it. This authority is confirmed by letters of administration, which are similar to letters testamentary.

The testamentary trustee's authority, like that of the executor, originates in the will, but usually he receives no document such as letters testamentary to evidence his right to act. Upon filing an oath of office, and (usually) upon executing a bond, he is recognized as a fiduciary officer under the control of the court.

Inventory. The first duty of the executor is to make an inventory of the personal property of the estate over which he is to exercise control. Some states require him to report the inventory to the court; some states permit him to do so; while other states make no mention of an inventory. Whatever the law of the executor's state may be, it is very desirable that he prepare an inventory and where possible file it with the court, because an inventory fixes prima facie the number and value of the estate assets. As a consequence, if an inventory is filed, any person who claims that estate assets were omitted from it or were incorrectly valued in it, has the burden of establishing the truth of his claim. If no inventory is filed, such a person can put upon the executor the burden of establishing the fact that the executor has accounted for all the estate assets at their true valuation. As a practical matter, it is obviously desirable for the executor to have the bur-

den of proof in such a proceeding placed upon the person who questions his administration.

In most states the inventory should include only the personal property of the decedent, because real property passes by law without the intervention of the executor, either to the persons to whom the decedent gives it in his will, or to those specified by law if the decedent made no disposition of it by will. The items of personal property should be given in detail and each should be valued in dollars and cents, the valuation preferably being determined by appraisers appointed by the court. Unless the law of the executor's state requires him to file with the inventory a statement of debts due by the decedent, the executor should make no report of such debts at the beginning of his administration. A separate proceeding described below is usually available for the ascertainment of debts.

In some states, as for example in New York, the procedure for the preparation and reporting of an inventory is elaborately set forth in the statutes. Such statutes generally specify what property shall be deemed assets to form part of the personal estate and to be included in the inventory, and state the procedure to be followed for appointment of appraisers to value the assets. As a practical matter these statutes are seldom followed in detail because inventories are required under the federal estate tax law and under inheritance tax laws in force in the various states. It may be mentioned in passing that the inheritance tax law in New York is known as the transfer tax law, because the tax is imposed on the transfer of the property by will or by the intestate laws of the state. The inventories required under these tax laws are generally used in lieu of inventories to be prepared by the

executor under the state laws, because there would be a duplication of the work in preparing a second inventory. Details concerning the contents and preparation of inventories will be discussed in a subsequent issue.

Collection of Assets. After the issuance of letters testamentary the executor should proceed at once to secure possession of all of the estate assets. In a subsequent issue the subject of estate assets will be discussed at considerable length, but at this point it may be well to mention that the word asset signifies personal property applicable to the payment of the debts of the decedent. In the theory of the law, assets "come into the hands" of the executor upon issuance of letters to him, and accordingly he must exercise all diligence in actually securing them. If the executor believes that there are assets in the possession of persons who refuse to deliver them to him, he should institute what are known as "discovery proceedings," in order to secure them. This he generally initiates by a petition to the court setting forth facts tending to show that money or other personal property which should be included in his inventory is in the possession or control, or within the knowledge or information, of a person who withholds the same from him. If the court is satisfied that there are reasonable grounds for the petition, it issues to the person named an order to show cause why he should not turn the assets over to the executor. Upon a hearing the person cited is sworn and examined, and, if the court believes that property of the decedent is being withheld or concealed, it requires the person to deliver the property to the executor or to give him a bond in the event that it is necessary for the executor to prove in court that the property belongs to the estate. Discovery proceedings are not designed to en-

force the collection of debts, but merely to provide a summary mode of reaching the property of a decedent in the hands of a third person. Consequently, it has been held² that these proceedings cannot be used to compel the payment of a deposit by a bank, because the relation between the bank and a depositor is that of debtor and creditor.

Custody of Assets. The executor is responsible for the preservation of the estate assets in his possession, but he is not an insurer of them. The law requires him to exercise the same degree of care that an ordinarily prudent man would exercise in the care of his own property of similar nature under similar business conditions.

In a solvent estate, that is, one which is certain to be able to pay its creditors, personal property which is not specifically bequeathed should be divided among the general legatees. (The subject of legacies and their payment is discussed below.) Each legatee who receives such personal property should, of course, be charged with its inventory value as if it were a payment of cash on account of his legacy. Frequently such articles of personal property as antique furniture, family jewelry, and other things which have certain personal attachments, become bones of contention among persons interested in the estate. If under those conditions amicable distribution cannot be made, the personal property should be sold, if there is reasonable assurance that it will realize its fair value. If the business advisability of selling the property is doubtful, the matter should be referred to the court.

Cash belonging to the estate should be deposited in a bank of recognized standing in the name of the estate. The deposit should be designated,

² Matter of White, 119 App. Div. 140.

for example, as "The Estate of John Doe, by William Roe, Executor." If the deposit is made in the executor's name without the designation of his fiduciary character, the executor is held personally responsible in case of the failure of the bank, regardless of his care in selecting the bank. It is held that he has assumed personal responsibility for the deposit when he has failed to indicate its trust character. In New York, he is guilty of a misdemeanor, although that does not seem to be generally known. As a rule the executor's duty is to collect and distribute the personal property and not to invest it. Consequently, the bank accounts of an executor are usually checking accounts, but if any substantial balance is carried, he should secure an interest return on the balance if it becomes necessary to deposit part of the cash in a non-checking but interest-bearing account.

A bank will ordinarily allow an executor to open an account in the name of the estate before the issuance of letters testamentary, but usually checks on the account will not be honored by the bank until it has been served with a certified copy of the letters. The executor should open deposits at once without waiting for the issuance of his letters, because if he fails to do so he will not be exercising the degree of care required by the law and he might be held personally responsible in case of loss by theft.

Expenses of Administration. Expenses of administering the estate are entitled to preference over all other claims, and these expenses include all of the legal and other necessary charges, from the expenses of probate to those of the final accounting. The necessity and reasonableness of expenses incurred by the executor in administering the estate are presumed, but if questioned by any party at interest,

the decision as to their propriety rests with the court. The character and the net amount of the estate are the controlling facts upon which the decision is usually rendered. In general all expenses of this character will be allowed, but disbursements for matters not directly connected with the administration of the estate will be disallowed if questioned. For example, lunacy proceedings against a widow and sole legatee would not be chargeable as expenses of administering the estate.

The executor is allowed an assistant or agent and as much clerical and office assistance as may be necessary, and the expense of such an organization is properly chargeable as an administration item. The necessity for the assistance must, however, be shown and notwithstanding the propriety of incurring the expense, the executor cannot relieve himself from personal responsibility. If a New York executor acts as his own lawyer, he may be allowed extra compensation.

Funeral Expenses. After the payment of the expenses of administration, funeral expenses are usually given preference over the payment of debts. Some states allow the expenses of the last illness to be included with the funeral expenses, but the usual rule is to treat them as ordinary debts.

Expenses of burial are obviously not debts of the testator because they were not contracted by him, even though he may have entered into an agreement with an undertaker concerning the details of his burial. Such expenses are given preference as a matter of public policy, which dictates that every deceased person should have a burial in a way suited to his former station in life. The amount properly payable for funeral expenses is subject to approval by the court, the law prescribing merely that it must be reasonable in

view of the circumstances of the case.

The reasonableness of funeral expenses depends primarily upon the solvency of the estate. Where only the rights of legatees or next of kin are involved, the rule is liberal, often to the extent of allowing a monument or tombstone, but where the rights of creditors might be prejudiced, the rule is strict. In that event the funeral must be plain and there must be neither monument nor tombstone. Funeral expenses include not only the expenses of actual burial, but also those of funeral services fitting to the station and religious faith of the deceased. In one case where the estate did not exceed \$500, the court held that funeral expenses of \$329.50 were excessive and suggested that \$150 would be a reasonable amount, stating that if the executor desired a greater display, he or the relatives should pay for it personally.

Ascertainment and Payment of Debts.

The law will not permit the distribution of a decedent's property to the exclusion of his creditors. After the payment of all administration and funeral expenses, the estate assets must be applied to the payment of debts existing at the time of the decedent's death. Since there can be no certainty that all such debts are shown by the decedent's books and records, or by such of them as can be found, the executor is usually permitted, but seldom required, to advertise for all creditors of the decedent to present their claims to him for allowance and payment. If the law of the executor's state permits him to advertise, he should do so for his own protection. He can be held personally liable for the payment of a debt presented to him within the time allowed by law to creditors for presenting claims, if in the meantime by distribution of assets, he becomes unable to pay the debt out of the estate.

All debts due by the estate that are

approved by the executor should be paid by him in the order prescribed by the law of his state. It is usual for the law to prescribe some order in which debts must be paid, preference being given to debts due to the United States, local taxes, and judgments of courts. The order of payment is of importance only in cases where there are not sufficient funds to pay all the debts. In such cases the executor may render himself personally liable if he pays without regard to the prescribed order.

If an executor believes a claim to be invalid he should reject it. The creditor will then have a legal remedy by commencing an action at law against the estate, and if he sustains his claim the executor will be compelled to recognize the judgment rendered by the court. In this connection it should be noted that the court which appoints the executor and has charge of the estate has no jurisdiction to try an action brought by a creditor whose claim has been rejected; nor can such court order the executor to recognize and pay the creditor's claim. The law gives the executor discretion in the allowance of claims, and, in fact, it would hold him responsible if he failed to exercise discretion properly.

Debts are payable primarily from the personal estate, that is, from personal property. Where, however, that is insufficient to pay the debts, the law provides means for selling land or buildings belonging to the estate in order to secure sufficient money to pay debts which cannot be satisfied out of the personal estate.

IV

Legacies and Their Payment. After the payment of the administration expenses, funeral expenses, and debts, the remaining property must be dis-

tributed in accordance with the provisions of the will. The gifts or amounts specified to be distributed are known as legacies. A legacy is a gift of personal property by will, the person to whom it is given being called the legatee. Legacies may be general, specific, demonstrative, or residuary. A general legacy is one which is payable out of the general assets of the estate, being a gift of money or other thing in quantity not in any way separated or distinguished from other things of like kind. A specific legacy is a gift of articles of personal property specifically described and designated, as for example, certain pieces of jewelry. A demonstrative legacy is a gift of money payable out of a specified fund; for example, a gift of \$1,000 payable from a deposit in a specified savings bank. A residuary legacy is a gift of all the personal property remaining on hand after distribution has been made according to the terms of the will in satisfaction of all general, specific and demonstrative legacies, and of course after payment of debts and expenses of administration.

As a rule legacies are not payable until a specified time, usually one year, after the issuance of letters testamentary. The reason why legacies are not payable at the beginning of the administration is that creditors must be protected by requiring the executor to conserve the estate assets until the amount of the debts has been ascertained. At the expiration of the specified time, general and demonstrative legacies bear interest.

Legacies are primarily payable from the personal estate and remain so unless the intention is made manifest in the will that real estate should be devoted to their payment. In order to justify the executor in selling real estate for the payment of legacies, the intent of the testator must be very

clearly established. For instance, the court has held that where legacies are given generally and the residue of the real and personal estate is included in one gift, no intention to charge the realty with the payment of legacies could be inferred, unless at the time the will was made the personal property was manifestly insufficient to satisfy the legacies and there was evidence that the testator knew the extent of his personal and real property, the amount of the legacies he was giving, and understood that the legacies could not be paid except out of the realty.

Specific legacies and demonstrative legacies are the first to be paid. If the assets then remaining are not sufficient to pay all of the general legacies, the latter are scaled down pro rata so that each general legatee can be paid an equal percentage of his legacy. This process of scaling down is known as abatement.

Legacies are subject to certain deductions, the principal ones being for personal inheritance tax (for example, the transfer tax in New York State) and for debts due to the testator by the legatee. It should be noted at this point that the federal estate tax is not deductible from legacies, but is a charge against the estate as a whole. It is not an individual inheritance tax but it is an estate tax, the purpose of the law being that it shall be paid out of the estate before distribution, although, of course, the testator by his will can impose the payment of the tax upon the legatees.

When the estate funds are ample and there is no doubt as to the estate's solvency, it is customary to pay to the legatees, if they request it, advances on their legacies. In paying such advances, however, the executor should be careful to deduct the amount of the inheritance tax, if any, and also any other deductions which may be charge-

able to the legatee. As a matter of business prudence, it is generally wise to withhold from the first advance the entire amount deductible from the legacy, and, if the amount involved is considerable, to require a bond from the legatee.

In the case of debts due to the testator by a legatee, the executor has a right to retain the amount due out of the legacy, which is roughly analogous to the enforcement of a lien. The courts do not regard the giving of a legacy as even *prima facie* release of a debt due by the legatee and such release must be established by legal evidence. It is interesting to note that such debts may be deducted from legacies payable even though barred by the statute of limitations. This follows from the fact that that statute affects only the remedy and does not discharge the debt, nor does it raise a presumption of payment. In other words, the right to deduct a debt due to the testator from the legatee is not merely a case of legal set-off under which no debt could be deducted unless payment of it could be enforced.

In connection with making advances to legatees, the executor should realize that if he withdraws productive funds from the estate to pay legacies before they are due, he may be chargeable personally with the loss thus caused to the estate, namely, the interest which would have been earned if he had not made the advances. He should understand also that if he inadvertently overpays a legacy, he will not be given credit for it in his accounting and that he must personally make good the amount overpaid, unless he can recover it from the legatee. If his mistake was reasonable and if he acted in good faith, the expenses of conducting an action at law against the legatee for the recovery of the overpayment may be charged to the estate.

V

Accounting by the Executor. After the assets have been collected and the administration expenses and debts have been paid and such payments on account of legacies as the executor has found advisable have been made, the executor must render to the court which appointed him a statement of his transactions in the form of an accounting. This accounting is to show the amount of cash and property received by him, the disposition which he has made of it, and the balance, if any, remaining in his possession. The forms of accounting vary in the several states. Some of them are exceedingly simple statements of receipts and disbursements, while others, notably in New York, are somewhat complex statements involving the inventory and subsequent adjustments of it. In view of the fact that the form in current use in New York is comprehensive and complex, subsequent articles dealing with the accounting will be based upon the procedure in New York State. If that procedure is thoroughly understood, it is not likely that the more simple methods of other states will present any difficulty.

Remuneration. For this work in administering the estate the executor is given a remuneration, usually in the form of commissions consisting of a percentage of the moneys which have passed through his hands. The New York scale of commissions and the New York method of calculating them will be used in these articles.

Duties of Testamentary Trustee. Where the will provides that certain properties or sums of money are to be given to the executor or to some other person as trustee for some specific purpose, the carrying out of the trust provisions is no part of the work of the executor. The specific properties or

sums of money must be set aside by the executor to form the trust funds, and until the executor has done that, the testamentary trustee, whether he be the executor or some other person, cannot assume his duties.

The work of the testamentary trustee consists in conserving the trust fund and disposing of it in accordance with the terms of the trust. Questions of importance and sometimes of difficulty arise in connection with this work, and in the succeeding articles some of these questions will be considered.

VI

The duties of the executor may be summarized as follows. He should prepare an inventory of all the personal property of the estate, known as the estate assets; he must collect and conserve the estate assets; he must pay

the administration expenses, funeral expenses, and debts owed by the testator, and distribute any balance of the property in accordance with the terms of the will, not omitting to set aside any trust funds that may be specified; he must then account to the court of his appointment, presenting a report showing the cash and property which he has received, the disposition which he has made of it, and the balance, if any, on hand. Thereupon the court will determine the commissions due to the executor, will authorize him to retain for himself the amount of his commissions together with an amount fixed by the court to reimburse him for the cost of the final accounting, and will order him to distribute in accordance with the court's direction whatever cash and other estate property and assets there may then be in his hands.

SYSTEMATIZED CONTROL OF MOTOR TRUCKS

BY GEORGE W. GRUPP*

IN working out any system of organization for the systematized control of a motor truck or a fleet of motor trucks, the safest and most comprehensive plan is by means of records. Records of operation, records of maintenance, records of cost—these are vital to the efficiency of a system. Records range in character from the pencil-checked chart, which the driver or garage mechanic may keep, to the formalized charts of routing and loading. From the point of view of the accountant the ideal record, limited in its range and adaptability of course, is that afforded by a recently invented instrument which gives on a circular chart an accurate and complete account of a truck's movements.

In their finished character these records will further vary according to the needs and size of the organization in which they are used. For example, the records entering into the operation of a leading tobacco company's fleet of trucks are conditioned by the form of their truck organization. This is "decentralized." Their trucks serve 74 owned or controlled factories in 49 different cities. At the end of each day every driver makes out a historical report which is checked by the dispatcher, who in turn sends it to the local trucking representative of the tobacco company. In another report, coming from the mechanical source in the organization, the local representative learns the expense of operating the truck for that day. These reports he sends to the traffic manager in the New York office, and at the end of the month the local

representative gets a summary report based upon those he has sent in. This report enables the traffic manager to see the decrease or increase in the efficiency of each truck.

In local operation the trucking representative has charge of all trucking operation and maintenance. His dispatcher or foreman has charge of loading and routing. His mechanic is in charge of all repairs made, and his overseer or runner watches the trucks as they are out on the street—to see if the drivers are doing full justice to their job.

An important oil company concentrates the control of its fleet of trucks, which operate in small fleets in different sections of the country, in the executive head at the main office. This concentration is then decentralized into main districts, etc., to fit into their sales organization plan. In each district the central head is the district transportation superintendent. He has an assistant who is in charge of all truck operations. The territorial representatives in each district are charged with the responsibility of truck maintenance in their respective territories. The mechanic in charge reports to the territory representative. The operating agents report to the territory representative, while the drivers and garage men report to the operating agent.

Each night a driver's and inspection report is made on each truck. The driver's report gives the operating data, while the inspection report gives information on the needs and actual repairs made on each truck. Where actual repairs are made, invoices are made out for material and labor used in

*Specialist in Motor Truck Control; Contributor to *The Commercial Vehicle*, etc.

The Commercial Vehicle—Truck Cost System

Number of Truck _____

Capacity in lbs. _____ Chassis No. _____

MONTHLY COST SUMMARY SHEETS

U. P. C. BOOK COMPANY, INC., 243-249 WEST 39TH ST., NEW YORK

Investment

Cost of chassis, less tires _____	\$		
Cost of body _____			
Cost of equipment _____			
Cost of tires _____			
1—Total cost, complete _____	\$		

Performance Record

- 2—Days operated _____
- 3—Days idle _____
- 4—Days maintained (Item 2 ÷ Item 3) _____
- 5—Total hours operated _____
- 6—Total miles covered _____
- 7—Total trips made _____
- 8—Total tons or packages or stops _____

Performance Averages

- 9—Average miles per day maintained (Item 6 ÷ Item 4) _____
- 10—Average miles per day operated (Item 6 ÷ Item 2) _____
- 11—Average miles per trip (Item 6 ÷ Item 7) _____
- 12—Average tons, stops or packages per trip (Item 8 ÷ Item 7) _____
- 13—Average commercial ton-miles, package-miles or stop-miles per trip $\frac{(\text{Item 11} \times \text{Item 12})}{2}$ _____

Recapitulation

- 14—Total expenses for month (Sum of Items A, B and C) _____ \$ _____
- 15—Cost per day operated (Item 14 ÷ Item 2) _____
- 16—Cost per day maintained (Item 14 ÷ Item 4) _____
- 17—Cost per mile operated (Item 14 ÷ Item 6) _____
- 18—Total commercial ton-miles, package-miles or stop-miles (Item 7 × Item 13) _____
- 19—Cost per commercial ton-mile, package-mile or stop-mile (Item 14 ÷ Item 18) \$ _____

making the repair. These invoices are then sent by the mechanic to the supervisor of equipment, who in turn, after approving them, sends them to the accounting department of the territorial office. All other records are also sent to the territorial office. The territorial office, after making its notations, forwards all these records to the district office, which later sends them to the main office of the company.

It is wise not to neglect the consideration that the expediency of a system of organization depends:

1. On the kind of business one is in.
2. Whether one is a local or a national distributor.
3. The necessity of quick turnovers, as in a chain of stores.
4. The necessity for carrying a fresh stock of supplies, and yet at no time being out of supplies.
5. Loading and unloading facilities.

Having come to conclusions as to these factors, one can begin to sketch in the details of organization.

A large commercial house combines centralized and decentralized organization. Control of its fleet is centered about the general manager, who also has charge of buying all vehicles. He divides his responsibility between the warehouse superintendent, who is in charge of the three- and five-ton trucks that deliver from the warehouse to the different branches; and the branch superintendent, responsible for 93 Ford trucks delivering goods in 344 towns.

Records of the warehouse superintendent's fleet and the branch superintendent's fleet are separate—each functioning in a different capacity. Through this three-man arrangement it was found that centralizing made control of truck management possible, whereas decentralizing made control of operation and maintenance possible. Hence this is the reason for combining the two forms of organization.

II

Before the germ of organization presents itself, however, a sufficient series of records must be present upon which to build any conclusions. Here a peculiar and apparently contradictory deviation appears, that rouses uniform question. Probably no two trucks, even though of the same make and capacity, will produce identical results. Like the disparity in golf: two players using the same drive almost invariably get different results. Weather, roads, hindrances, or driver, make identity impossible. In the aggregate, however, and after a careful analysis of daily records, say for fuel consumption, one will reach an average of consumption under any condition he may postulate. The standard of fuel consumption will most likely become the basis of determining the efficiency of the truck and driver, as well as the basis for an advance estimate of the cost of any given job under any given condition. Such knowledge has direct bearing upon handling rates.

One may start, however, with a simple report on each trip such as the following: time of arrival at each stop; time of leaving each stop; time taken to load; time taken to unload; weight of goods delivered; odometer readings; gasoline readings; total time of trips; total number of trips; fuel and ferriage consumption. A report is also included upon the condition of weather and road.

One concern, from data somewhat similar to the above, has worked out the theory that a particular kind of goods should go into a particular capacity truck. The rule of this concern is to have all three- and five-ton trucks assigned the task of hauling factory supplies and raw materials from the freight houses and boats to the warehouses. They are detailed to haul all

store equipment, and are used exclusively for long-distance runs. The one- and half-ton trucks are used for private house deliveries within a radius of five miles, and for carrying supplies to their chain of stores. The three-quarter ton trucks are used in marketing for eggs, vegetables, and the like.

Though the driver may rebel over the lack of personal integrity implied in a detailed report, there are arguments to which, unless he be a radical, he will listen, and if he does not listen perhaps he is not the right man. It is wise also to hire only the thoroughly experienced drivers, otherwise strange complications are apt to arise, as in the case of a man who bought a truck for carrying coal and lumber. An employee who had driven "old Dobbin" was made truck driver. About three weeks after the delivery of the truck the owner complained that the body was jamming against the driver's cab. Inspection showed the truth of this statement.

Naturally the manufacturer was much surprised.

"What have you hauled with this truck since the day we delivered it?" he asked.

"Lumber."

"All right," said the manufacturer, "we'll reset the body—three inches back of the driver's cab—and at our own expense."

As soon as the truck owner had gone, the manufacturer called the chief engineer.

"Look here," he said, "the man who has just driven in that truck says the body won't 'stay put.' Find out what's the matter."

When the truck was readjusted the chief engineer delivered it to the owner with the statement that it was as good as new.

"But," he added, "your driver has strong feet."

The owner failed to see anything serious in the remark.

In about four weeks the truck came back with the same complaint. Again it was repaired. This time, however, the chief engineer after adding his hint about "strong feet," asked the owner to have this truck used for hauling coal. Though thinking the suggestion strange, the owner complied.

A week later this admission came over the telephone from that truck owner: "You're right. My driver's feet are strong. A few minutes ago he was in here threatening to quit. When I asked why, he said, 'Every time I stop that truck the coal falls down on my head—and I bargained to drive a truck, not to be killed by falling lumps of coal.'"

Other conversation followed, in the midst of which the truck owner asked, "How did you know my driver had strong feet?"

"The break lining showed abnormal strain," replied the engineer.

III

Certain large concerns have runners who do nothing but watch the movements of trucks while they are on the street, but for a smaller concern such an outlay would be too great.

A simple device which truck owners might use in keeping track of the drivers' work is printed below. This chart, however, is but one of a number that might be used.

Of suggestions, however, that have been put forward to facilitate keeping track of the daily movements of motor trucks, and to advance this operation from guesswork to an exact science, few have seemed so simple as the mechanical recorder. This instrument gives the owner exact information as to the number of hours his truck was running or standing still; likewise the time

THE COMMERCIAL VEHICLE, Truck Cost System

Driver's Route Card

Vehicle No. _____ Date _____ 192__
 Driver _____ Left Garage _____
 Route No. _____ Returned _____

TRIP LOG

From	To	Tons, Stops or Pkgs.			Miles		Time	
		Out	Del.	Pick-ups	In	Out	In	
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
Totals								

SUPPLIES WORKERS' TIME MISCELLANEOUS

Gal. Gas _____ Driver _____
 Kwh. Current _____ Helper(s) _____
 Qts. Oil _____ Washer _____
 Lbs. Grease _____ Mechanic(s) _____
 Qts. Kerosene _____
 Lbs. Waste _____

O. K.

Supervisor

CARD TO CONTROL ROUTE

THE COMMERCIAL VEHICLE, Truck Cost System

Driver's Mechanical Report

Check each part on this list. Repairman will correct all
 troubles reported herein.

MOTOR MISCELLANEOUS

Ignition _____ Wheels _____
 Carburetor _____ Springs _____
 Cooling _____ Frame _____
 Lubrication _____ Radius Rods _____
 Valves _____ Torque Arm _____
 Governor _____ Radiator _____
 Power _____ Fan _____
 Knock _____ Fan Belt _____
 Compression _____ Battery _____
 Missing _____ Controller (Elec. Veh.) _____

TRANSMISSION

Clutch _____ Levers _____
 Gearbox _____ Wadshield _____
 Universals _____ Lamps _____
 Jackshaft _____ Speedometer _____
 Differential _____ Fenders _____
 Chains _____ Cab _____
 Body _____

BRAKES

Foot Brakes _____
 Hand Brakes _____

STEERING GEAR

Gears _____
 Tie-rods _____
 Front Axle _____

TIRES

Left, front _____
 Right, front _____
 Left, rear _____
 Right, rear _____

Key: /—Performance O. K. A—Adjust. R—Repair.

Repairs and adjustments made,

O. K.

MECHANICAL REPORT OF DRIVER

of day at which it was running or standing. The device is so attached to the body of the car that it cannot be tampered with by the driver.

To those unacquainted with the problems of truck control, a chart of this sort seems to present merely a succession of periods of running and standing time. But the shipping superintendent or truck dispatcher knows in advance what work the truck has had to do, and experiences little difficulty in identifying the various trips and stops shown on the chart.

One typical illustration may be given to show the advantage of records. The simplest, of course, will deal with the control of an individual truck. But what is true of one will be true on a still larger scale of a fleet of trucks. The truck owner who goes into the shipping room to question, first, the shipping clerk and then the truck driver, is never sure of his grounds without a record of the facts as to the movements of the truck. In such cases, especially

where the boss is mistaken in his deductions, dissatisfaction among the drivers is a sure result.

When, however, the truck owner has in his hands a strip of paper on which every movement of the truck has been recorded hourly, from the time the truck has left the garage in the morning until it was housed for the night, his drivers know that he speaks with authority because of the proofs recorded on the chart. They know they cannot bluff this boss because the facts are there in black and white.

Experience has shown that some truck drivers are inclined to object to any form of a check or record of their movements. When these employees, however, are taken into the confidence of the firm and shown that the purpose of the record is to produce efficiency not only on the part of the driver but also on the part of everyone connected with the loading and mapping of routes, etc., these objections usually disappear.

Larkin Co.

CHECK NO.

NAME OF DRIVER

CAR NO.	TRIPS	IN BLANK SPACES BELOW WRITE PASSENGERS CARRIED; FREIGHT HAULED; CITY DELIVERIES; DESCRIPTION OF REPAIR WORK AND NAME OF HELPER.	HRS.	MIN.	ODS REMAINS BEFORE	ODS REMAINS AFTER	Miles	Ex. Load Standard or Heavy Scale
		0 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12						
		0 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12						
		0 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12						
		0 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12						
		0 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12						
		0 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12						
		0 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12						
		0 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 4 5 6 7 8 9 10 11 12						

MECHANICAL TROUBLE

DATE _____

KIND OF TROUBLE	TRUCK NO.
ENGINE	1
CLUTCH	2
FLYWHEEL	3
FRONT SPRINGS	4
REAR SPRINGS	5
TIRE TROUBLE	6
FRONT AXLE	7
REAR AXLE	8

IV

A motorized equipment of the Department of Street-Cleaning in Model District Number Six, New York City, provided for inspection a set of completely functioning records. There were available the number of trips made by each vehicle from the date of delivery. These records were reduced to a summary monthly report, and from the report one could see the number of days each vehicle worked; the number of miles it traveled; the number of trips it made; the total number of cubic yards of ashes, rubbish, snow, and ice that it collected; the average number of miles for each trip; average miles an hour; the average number of gallons of gasoline and oil it consumed, as well as the total fuel consumption for the month.

Such a recording system modified to fit a particular business would commend itself as a means of keeping tabs on the efficiency of a truck.

A driver's performance records lead to another process in the control of routing and scheduling. In this work someone, probably the route clerk, determines the weight and space which each order will occupy. To facilitate these calculations there is on the market a book on weights and spaces which tells the amount of weight and space a given quantity of a given product will occupy. He may likewise add to that information the amount of time required to make C. O. D., prepaid, or credit deliveries, so that he may plan the number of trips a day each truck can make and know where, at any time of day, each truck will be.

Someone who has worked out an estimate on the time necessary to perform a given task, makes this suggestion: The first step is carefully to analyze the driver's reports; the second to make a trip performance log. The equipment

is most elementary—ruled paper, pencil, drawing-board, and watch. The observer so equipped sits beside the driver, noting each detail from the start of the engine until the return of the truck to the garage at night. This process is repeated, upon different routes, where roads, traffic, and the like, create variation. Then after a sufficient number have been collected, one can strike an average.

Records kept of performance have helped occasionally to solve complicated problems. One of these was the solving of a "peak load" in a large New York department store that occurred about Christmas. For a number of years this store had tabulated the number of packages delivered each month. After being graphically reduced, the chart showed that during November and December deliveries reached a maximum. The chart also showed that during July and August deliveries were at a minimum. Realizing that its trucks must be in good condition, that there must also be a sufficient number of drivers and helpers, and that all trucks should be worked to full capacity, this store spent the summer in putting its trucks into shape. Then after determining the average volume of business for a period of years it decided to buy enough trucks to handle three-fourths of their maximum business. With this equipment and by working one or two trucks three or four hours a day longer during their "peak load" period, it met its problem with far less expense. Had it failed to keep complete record on deliveries the solution of the problem would, so one of its executives says, have been more difficult.

V

If one keeps a maintenance record one or two considerations appear to need constant attention. Each driver

should make a daily report upon the condition of his truck. To check up on this the garage man might advantageously delegate a mechanic who each week should make an independent inspection irrespective of the driver's report.

The graph shown on another page illustrates how mechanical troubles are recorded in the garage of one industrial plant. It shows at a glance which truck driver is having the most trouble and which one has the least. Every time the mechanic makes a repair he draws a line from the kind of trouble given on the list to the number of the truck which has been repaired. Three lines leading to a truck make a danger signal. Then an investigation should be made to learn the cause. This may be a careless driver who is inefficient. Possibly one truck has been making not only the long but also the heavy hauls. If so, such a truck might naturally show considerable "wear and tear" and hence justify the three lines of mechanical trouble. Experience has shown that a graph like that shown in the illustration needs to be supplemented by other records before anyone is "called to the carpet."

No owner wants his truck idle for longer than is absolutely necessary; repairs, therefore, going into the up-keep of trucks in large concerns, are often advantageously put under the unit system. In this way trucks are repaired by units: rear axle, clutch, engine, and the like. Complete units such as these are carried in stock so that when a truck comes into the garage for repair, the defective unit is removed and the stock unit substituted. Such a process reduces the truck's period of idleness.

In one large concern the maintenance superintendent sees to it that all parts of a unit are grouped in a single bin, and that each bin is numbered. This number he has transcribed in ink oppo-

site that particular part in the manufacturer's catalogue. In this way, effort in running down the manufacturer's order number for any part is largely eliminated.

All organization, however, represents an outlay of money, and in that outlay a large part of the truck owner's interest is centered. In the choice of a cost system there is great latitude; some are simple, some are elaborate. For the man, however, who owns one or two trucks, a cost system involving many forms is not very apt to be worth considering. On the assumption that the truck owner's equipment is to be the simplest, certain essentials should be kept in mind: drivers' wages, depreciation, gasoline, materials for repairs, labor in making repairs, and tires. The latter need careful attention because they fluctuate in price. The other items are more stable in price.

VI

The performance card mentioned in the first part of this article might be used in keeping some account of cost. Another and more comprehensive form—suggested with the idea that the user will own but one or two trucks—is that reproduced on another page. Its simplicity makes it self-explanatory.

Suggestions offered throughout this article do not imply an infallibly linked plan of action, either in the form of organization, the kind of performance and maintenance records, or the character of cost systems—except in so far as the belief in the invaluability of carefully kept reports lies behind each suggestion. Latitude of personal choice, because of this point of view, will in no way be impeded; it will be increased provided that organization to be developed can be visualized from the standpoint of systematically articulated records.

COMBINATION BONUS AND PRODUCTION CONTROL

BY CLINTON E. WOODS*

IN view of the readjustment that must inevitably take place in business and industry within the next twelve months, any system combining production control and a bonus method of paying labor should be of interest; and it is to satisfy this interest that I present such a system below, considering, first, a pay-plus plan, and second, a production control system, which will make this pay-plus plan feasible, the whole making a complete cost system.

II

The question of pay on a bonus basis of any kind is a most important one, since it is, or should be, the *dominating influence* over labor and the largest factor in intensifying production. Furthermore, it should be given serious consideration as regards standard times, because a bonus system which does not enable the majority of employees to make uniformly extra pay is of little value and breeds discontent rather than content among them.

To be acceptable to the employee, any "extra pay system" installed today should be one whereby the employee has all of the gain and not merely one-half, as has been provided in some instances, especially in connection with premium plans.

That an employee is entitled to payment for all the time that he saves over a given limit or standard seems only just; nor is the benefit confined to the employee, since the employer benefits also to the extent that his plant capacity is increased by whatever extra earn-

ings are made. Moreover, if an "extra pay system" is properly designed, the more a man earns, the less the cost per piece should be for manufacture.

In other words, it is necessary for the success of an "extra pay system" that it be entered into in a perfectly fair spirit on the part of both employee and employer, as, in so far as the earnings are concerned, they constitute, morally at least, a partnership wherein the employer furnishes the opportunity and equipment, and the employee the time, the employee getting, as before stated, the benefit of all the time saved, and the employer a lesser piece cost and increased production on the same investment.

Taking into consideration the foregoing, I have developed a pay-plus plan which can be worked from either an "efficiency" or "time-saved" basis—the principles in each being exactly alike. A considerable difference, however, exists as between earnings on the part of the employee and savings to the employer. But in either case the pay-plus plan has been designed to meet all the foregoing requirements and the merits of either plan, in so far as earnings and costs are concerned, are fully illustrated by referring to exhibits P.P.P. #1 and P.P.P. #2, wherein several examples have been worked out covering the same operation, illustrating how the employee's rate increases, how production increases, and how the cost per piece decreases under either plan. The basis for a pay-plus plan, however, must first be clearly understood, as in both of the methods the estimated time is the same, but the standard base for time is different. In

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the example illustrated the estimated time is 122 hours, the standard time for P.P.P. #1 being 75% of the estimated time, and the standard time for P.P.P. #2 being 100% of the estimated time.

Referring to exhibit P.P.P. #1, the first example represents an operation on which the standard time is 91.5 hours for 25 pieces. If an employee makes these 25 pieces in 123 hours he fails to receive any "plus," only receiving his regular day pay, in this case 42 cents per hour, making the cost per piece \$2.066 and the time per piece 4.92 hours. Under exhibit P.P.P. #2 we find that the results are the same. As like quantities are used in each plan, like results are obtained. The standard time, however, is 122 hours and anything less than this is time saved.

The second example shown in exhibit P.P.P. #1 illustrates how the employee has reduced the actual time from 123 to 122 hours. This reduction increases the employee's efficiency from 74.4% to 75%. As 75% is the percentage, the employee must arrive at before sharing any "plus," the reduction from 123 to 122 hours does not increase the employee's pay, but it does benefit the employer, as a reduction of one hour has been made from 4.92 hours to 4.48 per piece; and exhibit P.P.P. #2 of this same example has identical results, inasmuch as 100% is the point the employee must pass before earning any "pay plus."

The third example shows both plans as starting to pay the employee a "pay plus." It will be noted that there is a difference between the results of the two plans in this example, the employee's rate per hour being 42.2 cents and 42.3 cents respectively; the cost per piece being \$2.045 and \$2.049. The time per piece is the same, as are also the actual hours and employee's day rate.

Using the same amounts as a basis

for both exhibits, we find that up to this point where both plans are paying a 25% "plus" rate, that the P.P.P. #1 is advantageous to the employer as the employee's rate is lower, therefore the cost per piece is lower.

The fourth example, exhibit P.P.P. #1 and P.P.P. #2 pay the same "plus" rate, therefore the employee's rate, cost of piece, and time per piece are the same, the "plus" rate in this instance being 25% in both cases.

Example five of exhibit P.P.P. #1 and P.P.P. #2 illustrates how the latter is advantageous to the employer when the "plus" rate is over 25%, inasmuch as in #1 the cost per piece is \$1.81, while in #2 it is only \$1.60, the total hourly wage being in #1, 69.3 cents, and in #2, 61.5 cents.

Example six is shown as an extreme case in which there is a marked difference as between the earnings of the employee and the cost per piece; in #1 the earnings per hour being 84 cents, while in #2 it is but 61.4 cents, the cost per piece being in #1, \$1.76, and in #2, \$1.43.

From the foregoing it is evident that the #2 plan is the safer plan for the employer. It has a wider range of savings and there is not the danger of excessive wages being earned. It is also to be observed, in conjunction with the methods for figuring the time, that the #2 method is much simpler to handle from a time-keeping and pay-roll department point of view. These examples and illustrations make the explanation and comparison of the two pay-plus plans perfectly simple, inasmuch as the employer increases his earnings in P.P.P. #1 by actually making standard time or better, or any portion in excess of 75%, and in P.P.P. #2 by the time saved or reduced below 100%.

As a general policy, it has always been understood, in connection with

any plan designed to intensify production, that employees should be allowed to earn anywhere from 20% to 30% more than their normal wage would be, otherwise there would be no incentive for them to speed up. Therefore, in setting the standard times on the work in order to make a pay-plus plan effective and satisfactory, very careful consideration must be given to the setting of standard times, which should be started with the best information available and with the understanding that all times, to commence with, will be "trial" times only, on which a "plus" will be paid, and if it is found after a reasonable try-out that employees cannot make a satisfactory "plus," the standard time will be lengthened. On the other hand, if it is found that the standard time is too long, and the bonus made is too large on any particular piece or operation, in justice to all other employees, this time must be shortened. This should be clearly explained to all employees, so that they may feel that the whole pay-plus plan is perfectly fair.

Foremen should be allowed to participate in this pay-plus plan, as it is necessary, in order to co-ordinate all interests, that they have the same incentive to intensify production as the men they direct. Their wage, therefore, should be increased each month by the average percentage of all employees in their charge. This not only makes them interested in the men and their work but also in the pay-plus plan as a method. Division heads and superintendents should also be paid on the same basis. That is, the average percentages of the foremen could be the basis for a pay-plus plan to them, thus co-ordinating the production end.

It is recommended that the "plus" be paid once a month, on the tenth of each month, for all "plus" earned the month previous, which should give

ample time to figure out the "plus" for each and every employee without having to employ extra clerical help.

Furthermore, the system of time keeping must be so arranged that a running record is kept of this "plus" by days, and one extension made for the entire month and in this way:

Say that a man has worked 200 hours for the month in accordance with P.P.P. #2, which are his regular working hours, and which will represent his regular pay. Let us say that, in addition to this, he has made 50 "plus" hours, therefore the percentage which should be paid him for the month would be 25%. If he were paid 42 cents per hour for 200 hours, his regular wage would be \$84, and 25% at \$84 would be \$21. In other words, the man is not paid a bonus by the individual piece or pieces he may make, but by the percentage on the total hours work for the month, as against total "plus" hours made, therefore all the clerical work that is necessary to take care of this is to keep the running record for each employee during the month and make one extension for his "plus" at the end of the month.

The table on the following page shows a comparison of results from the two plans:

P.P.P. = Pay-Plus Plan

R = Hourly wage rate

AT = Actual time

ST = Standard time

R₁ = P.P.P. #1 hourly wage rate

R₂ = P.P.P. #2 hourly wage rate

Payment under P.P.P. #1 is made according to the formula:

$$\frac{(R \times AT) \left(\frac{ST}{AT} - .75 \right) + (R \times AT)}{AT} = R_1$$

Payment under P.P.P. #2 is made according to the formula:

$$\frac{(R \times AT) \left(\frac{ST - AT}{ST} \right) + (R \times AT)}{AT} = R_2$$

PAY-PLUS PLAN COMPARISON

	P.P.P. #1			P.P.P. #2			DIFFERENCE	
	WEEKLY WAGE AND COST	HOURLY WAGE	TIME IN HOURS	WEEKLY WAGE AND COST	HOURLY WAGE	TIME IN HOURS	WEEKLY WAGE AND COST	HOURLY WAGE
25 PIECES								
Standard Time.....			91.5			122.		
Actual Time.....			123.			123.	No	Plus.
Regular Pay.....	51.66	.42		51.66	.42			
Plus.....	.00	.00		.00	.00			
Pay Plus.....	51.66	.42		51.66	.42			
Labor Cost per Piece.....	2.066			2.066				
Time per Piece.....			4.92			4.92		
25 PIECES								
Standard Time.....			91.5			122.	No	Plus.
Actual Time.....			122.			122.		
Regular Pay.....	51.24	.42		51.24	.42			
Plus.....	.00	.00		.00	.00			
Pay Plus.....	51.24	.42		51.24	.42			
Labor Cost per Piece.....	2.049			2.049				
Time per Piece.....			4.88			4.88		
25 PIECES								
Standard Time.....			91.5			122.	Favors P.P.P. #1	
Actual Time.....			121.			121.		
Regular Pay.....	50.82	.42		50.82	.42			
Plus.....	.30	.002		.41	.003		.11	.001
Pay Plus.....	51.12	.422		51.23	.423		.11	.001
Labor Cost per Piece.....	2.045			2.049			.004	
Time per Piece.....			4.84			4.84		
25 PIECES								
Standard Time.....			91.5			122.	Results equal	
Actual Time.....			91.5			91.5		
Regular Pay.....	38.43	.42		38.43	.42			
Plus.....	9.60	.105		9.60	.105			
Pay Plus.....	48.03	.525		48.03	.525			
Labor Cost per Piece.....	1.921			1.921				
Time per Piece.....			3.66			3.66		
25 PIECES								
Standard Time.....			91.5			122.	Favors P.P.P. #2	
Actual Time.....			65.25			65.25		
Regular Pay.....	27.40	.42		27.40	.42			
Plus.....	17.86	.273		12.74	.195		5.12	.078
Pay Plus.....	45.26	.693		40.14	.615		5.12	.078
Labor Cost per Piece.....	1.81			1.606			.204	
Time per Piece.....			2.61			2.61		
25 PIECES								
Standard Time.....			91.5			122.	Favors P.P.P. #2	
Actual Time.....			55.			55.		
Regular Pay.....	23.10	.42		23.10	.42			
Plus.....	21.11	.384		12.70	.231		8.41	.153
Pay Plus.....	44.21	.804		35.80	.651		8.41	.153
Labor Cost per Piece.....	1.768			1.432			.336	
Time per Piece.....			2.2			2.2		

III

The whole scheme of any production control is dependent, first, upon organizing a Production Division, subdivided into certain departments, for the handling of all the detail incident to production control; and second, the holding of inventories during periods of conversion. This is perfectly simple, if at the start a general stores, parts stores, and finished stores method of keeping inventories is adopted, the following being a summarized outline of the necessary procedure.

Everything purchased must be charged to General Stores. As these stores are required for the factory, they are issued to a production order, a betterment order, repair order, or some kind of an account number, so that their uses may be distributed to departments and production under some definite classification, General Stores being credited accordingly.

When production orders are given for pieces or parts, and it is desired to get the cost of these pieces or parts which are not in themselves salable until they are assembled with other pieces or parts, a Parts Stores is set up and production orders for some definite quantity of each piece are made, the order closed and Parts Stores charged.

When it is desired to assemble a unit or any kind of sub-assembling, another production order is issued. These pieces or parts are then drawn from above stores and charged to the order for assembling, Parts Stores being credited. When any particular unit has been assembled and completed, the order is closed and Finished Stores are credited and Accounts Receivable are charged. During the periods of conversion, all orders are grouped together and charged to an account called "Work in Progress."

As an order is closed up and the cost

obtained thereon, this account of Work in Progress is credited, and either Parts or Finished Stores charged accordingly. In case of betterments, the class of betterments for which the order is made is charged, and Work in Progress credited.

In order to make this whole procedure perfectly clear, and to further specify exactly how these divisions come, a chart is herewith presented, of which the following is a brief description:

Point "A" indicates where a purchase order is sent to obtain materials, supplies, equipment, etc. Theoretically, it makes absolutely no difference what is purchased for the company; it must pass into the inventory of General Stores "B."

From "B" those stores are disbursed to "C" Production Order Numbers, Betterment Order Numbers, Repair Order Numbers, or Account Number of some kind for operating supplies, the method being to issue a requisition which is nothing more or less than a check, issued to pay the general stores-keeper for the goods and materials which he delivers to the factory. These requisitions will deliver all materials to parts, betterment, and repairs in process of manufacture, and be charged to Production, Betterment or Repair Orders, according to the nature of the work.

Repair orders will be charged to Reserves for Depreciation after completion, thus completing the inventory on these items. Betterment orders will be charged directly to the classified assets, thus completing the inventory on these items. All production orders, however, as rapidly as finished, will be credited to Work in Progress and charged to "D" Parts Stores, which will complete the inventory of this portion of manufactured production.

The next production order will be

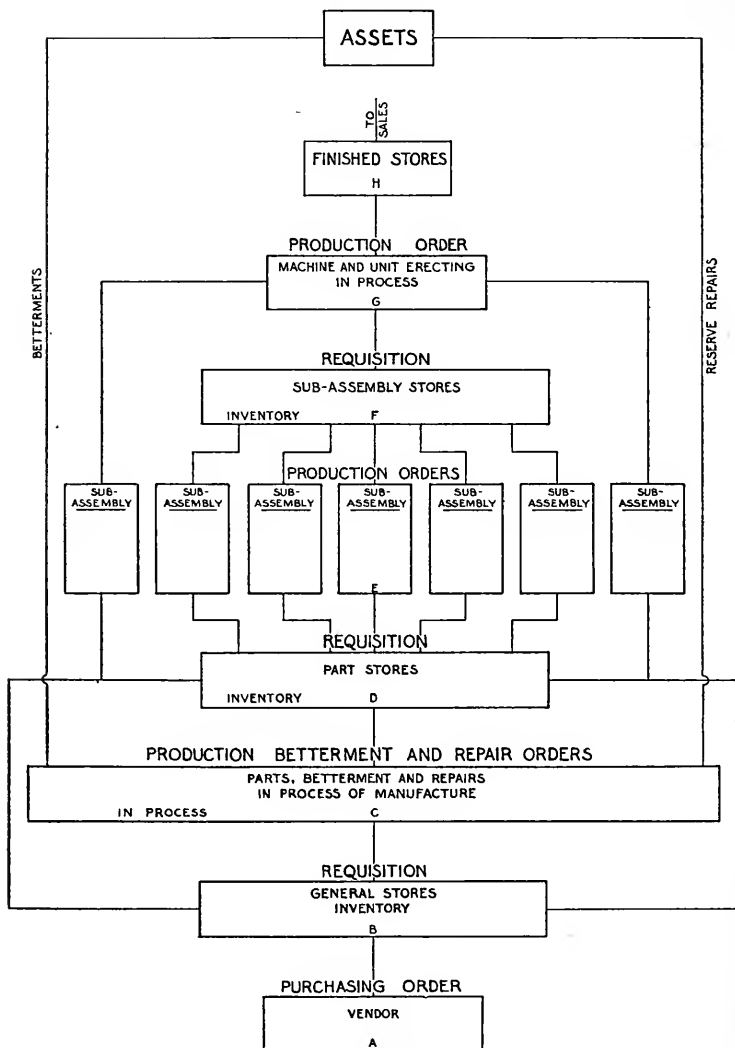


CHART OF INVENTORY CONTROL

issued for "E" sub-assemblies which will divide themselves up into a large number of groups, according to the character of the machine made.

As soon as these production orders are completed, they pass into "F" Sub-assembly Stores.

When it is desired to erect a machine or complete unit, "G" Production Orders are made out and requisitions are issued on Parts Stores and on General Stores, a combination of these with Sub-assembly Stores making the putting together of a complete unit possible.

As these production orders are finished, they are charged to "H" Finished Stores, which simply becomes a warehouse proposition, Finished Stores then being credited as sales or shipments are made, and Accounts Receivable charged accordingly.

From the foregoing, it will be seen that Inventory of General Stores "A" relates absolutely to any and everything purchased; that the Operations of the Factory then divide themselves into six separate inventories:

"C" Work in Progress for all Parts, Betterments, and Repairs.

"D" Parts Stores Inventory of the product manufactured for sale.

"E" Work in Progress on all sub-assemblies.

"F" Inventory of all sub-assembly work done.

"G" The Work in Progress on machine or unit erection.

"H" Finished Stores of machines completed.

Physically, Parts Stores and Sub-assembly Stores may be kept in the same room, but in order that an absolute control may be had of inventories and uncompleted production orders, requisitions should be issued and controlled in such a way as to give the divisions scheduled above—a stores

record giving us the details as well as the inventory values in each case, and the record of production, betterment, and repairs order sheet giving us the detail of the completed inventories as well as the values of all work in process.

This explanation is made in order that all of those interested in handling this method of production control may know that there is a definite reason for every move that is made, and that the entire system of production control has these definite purposes:

1. To obtain maximum output by a definite control over the flow of work through the factory.

2. To obtain at the same time and by these same methods, actual costs on what is done.

3. At the same time and by the same methods, to inventory and keep control of all moneys invested in labor, material, and expenses.

4. To close out, at the same time and by the same methods, all factory activities into a set of controlling accounts.

Therefore, from the foregoing, there should be no misunderstanding as to the purpose of the following methods, or the absolute necessity of each and every employee doing his part of the work to obtain the results required from the application of these methods, as it must be borne in mind that it is by these procedures that the answers are obtained on output and costs, not only for the benefit and credit of the various department heads affected, but for the executives of the company as well.

In connection with the following methods, it must be borne in mind that lists for assembling and erecting must be provided, and that it is also necessary, in so far as possible, to have standard time or time limits set upon all the work which is to be done, and also to have minimum set-up quantities for each piece established.

(To Be Continued in March Issue.)

PROBLEMS FOR THE BUSINESS EXECUTIVE

ACCOUNTING PROBLEMS

BY HAROLD DUDLEY GREELEY

A FREQUENT cause of contention between business executives and their accounting departments is the latter's habit so often observed of including in their reports only financial rights and obligations. When it becomes necessary for the organization to present to bankers or others a certified balance sheet, all contractual rights and obligations which have a financial bearing upon the business are usually sought out and stated, either in qualifications of the accountant's certificate, or in comments or footnotes in his report. Such reports, however, are as a rule too infrequent to be of assistance in the administrative control of the business. Executives are accordingly growing more and more to demand of their accounting departments the same sort of careful estimating which it is usual to expect of public accountants.

Many of the simple contractual rights and obligations, such, for example, as ordinary domestic commitments, or orders for merchandise to be purchased by the business, can be kept track of currently by the accounting department and reported periodically without much difficulty. In like manner, back orders and contracts for future delivery of merchandise may be controlled on the books and records of the accounting department with comparative ease. A much more complex and difficult situation is found where contractual elements permeate practically the entire business structure, and where the estimating of the financial rights and obligations ultimately to arise can be made with only approximate accuracy. A notable example of this situation is in the general contracting business. It may be of interest to have presented here a statement of the accounting difficulties inherent in the business, and a suggested solution of some of them. In order to assure a common ground for discussion, a brief statement of the nature of the business is given.

General Contracting. This discussion concerns the accounting requirements of a general building contractor, undertaking work on a fixed price basis. Such work usually reaches the general contractor through an architect engaged by the person for whom the work is to be done and who will hereinafter be referred to as the owner.

After the owner and the architect have agreed upon the plans and specifications, the architect requests various contractors to submit bids for the construction work. Each contractor makes a careful examination of the plans and specifications, which examination includes the calculation of the quantities of all material to enter into the work and the ascertaining of the prices at which such material can be secured. This inspection, frequently referred to as estimating, requires careful work by practical men who are familiar with the trades and materials involved.

After the contractor has satisfied himself that the quantities have been "taken off" correctly, he decides what portions of the work he will sublet to sub-contractors, and then requests bids from sub-contractors in much the same way that the bid for the whole job was requested of him. After the bids of sub-contractors have been examined by the contractor and have been found to be satisfactory, the contractor will submit his bid on the whole job. If the contractor's bid is accepted, a contract is signed with three parties to it: the owner, the contractor, and the architect. In theory the architect is an impartial arbitrator of differences between the owner and the contractor, but in general practice it is frequently found that the architect is inclined to represent the owner.

After the contract has been signed and sub-contracts have been let, the contractor begins his work. His problem now becomes one of keeping his own costs and his payments to sub-contractors within the

estimated amounts, so that the sum ultimately to be received from the owner will leave him a profit. If the main contract and the sub-contracts are on a cost-plus basis, the contractor's problem is very much simplified. The chief difficulty arises when the main contract and sub-contracts are on a fixed price basis.

Contractual Rights and Obligations. It is evident that upon the signing of the contract the contractor has a contractual right against the owner, but before the performance of any work he has no financial claims against him. It is evident also that without modification of the contract the financial obligations of the owner cannot exceed the stated contractual amount. The same situation prevails in regard to sub-contracts. Thus, at the very beginning there arise two sets of rights and obligations to be kept track of by the contractor: namely, the contractual ones and the financial ones. The following method of account-keeping presents a system which has been in use and which has proved practical; it is offered as a basis of discussion, in the hope that as a timely topic it will induce criticisms or suggestions from readers who have to meet the practical problems involved.

Job Costs. It is essential that accurate costs of each job be kept and that these costs include not only all direct charges, but also a properly proportioned or distributed share of the general overhead expenses of the business. It is essential also that these costs be so kept as to be comparable currently with the estimated costs, in order to furnish the executive with data as exact as possible indicating whether or not the estimates are being exceeded.

The very first cost in connection with the job is that of estimating as a preliminary to the bid. This estimating involves the salaries of superintendents and other employees who examine the specifications and take off the quantities, and the office expense such as tabulating and typing required in the preparation of the bid. Other expenses directly connected with the effort to secure the contract may include disbursements for traveling, and it should include a portion of officers' and office salaries, and office expenses covering the inter-

viewing of architects and sub-contractors. All the direct expenses of estimating should be charged to a separate account for the prospective job, and all of the indirect expenses should be apportioned to it. If the job is secured, the total of these charges on it should be charged into the cost of the job, but not, of course, as a construction cost. If the job is not secured, then the costs of estimating form part of the general overhead of the business, to be distributed or otherwise disposed of upon whatever basis may seem equitable under the circumstances.

Procedure and Terminology. While the practice necessarily varies among general contractors, it is believed that the following procedure is fairly typical. At least it will form a basis for the illustration of the proposed system of accounting under which the contractual rights and obligations can be distinguished from the financial ones.

When a certain amount of work has been done on the general contract, the contractor makes a requisition for payment on account and this requisition is sent to the architect. A simple form of requisition is usually sufficient. It should be an application for a specified amount of money supported by a schedule showing the items of work, such as masonry, on which the requisition is made. For each item there should be shown the contract price, the amount of previous requisitions, the amount of the present requisition, and the balance to finish the work. From the total of the amounts requisitioned for each item of work there should be deducted the percentage to be retained by the owner under the contract to guard against defaults by the contractor, this frequently being 15%.

The architect examines the requisition as to its statements of contract price, previous requisitions and retained percentages, and also satisfies himself that sufficient work has been satisfactorily done by the contractor to warrant the payment of the requisition. This latter verification is usually secured by having a representative of the architect on the job as an inspector. The duties of this inspector or clerk of works, as he is sometimes called, are to satisfy himself that the contractor is at all

times complying with the specifications which form part of the contract.

After approval of the requisition or a reduction of it to an approved amount, the architect issues a certificate which states to the owner that the contractor is entitled to a specified amount of money. The owner thereupon becomes financially obligated to the contractor for the payment of the certified amount.

A somewhat similar procedure is followed by sub-contractors in making requisitions on the contractor for payments on account. The contractor approves the sub-contractor's requisition either for the amount asked or for a reduced amount, and thereupon arranges for payment to the sub-contractor. As the contractor frequently has charges for material or services supplied to the sub-contractor, the amount of such charges are, of course, deducted from the amount approved on requisition. The payment to the sub-contractor may be made at once in cash, or it may be deferred until money has been secured from the owner upon architect's certificates, or notes may be given to the sub-contractor which the latter may discount at his bank.

During the process of construction many minor changes in plans and specifications are likely to occur, and these changes either increase or reduce the amount of the contract, usually with corresponding changes in sub-contracts. The alterations of the main contract are generally effected by means of special orders issued by the architect, and similar changes in sub-contracts are made by means of special orders issued by the contractor. These special orders are usually upon printed forms carrying numbers for identification. On the contractor's accounts these special orders from the architect may frequently be debited or credited to a contingent account to be held in suspense until the completion of the work, when the net amount of the additions or reductions of the contract can be ascertained. But special orders are themselves contracts, and the final recording of them should follow the procedure explained below for the handling of the main contract and sub-contracts.

If the general contractor does any of the work with his own organization, which is

usually the case, he incurs costs for material, for superintendents' and other workmen's salaries, and for overhead expenses. These costs, of course, are accumulated in job accounts.

Job Accounts. Most contractors do not attempt to show the contractual or contingent elements in their accounts. Their argument in justification is that the business is so contingent and so dependent upon estimates, that until the completion of the job the accounts can never show and can scarcely approximate the actual conditions. While it is true that contractual or contingent elements should not be confused with financial or current ones, nevertheless it is believed advisable to show both kinds of elements upon the accounts, carefully distinguished from each other, so that no important fact can reasonably be overlooked.

The fundamental feature of the proposed system consists in having in the general ledger three accounts for each job, each account being divided into two sections. The three accounts are respectively with the owner, with the sub-contractors, and for the profit or loss on the job. The general ledger account for sub-contractors is a controlling account, the individual accounts being kept in a loose-leaf ledger in the form suggested below. Each of these three accounts is divided into two sections, one of which is concerned with the contractual rights and obligations on contracts and sub-contracts, and the other with financial matters, such as accounts receivable, accounts payable, and items of income and expense.

This division of the account may be readily secured by a ruling across the middle of the page dividing the account into upper and lower halves. For convenience the upper half may be referred to as the contract section of the account, and the lower half as the account section. The whole accounting system is designed to facilitate postings to these two distinct sections of the job accounts, in much the same way as if they were separate accounts in separate ledgers. It should be noted that the division into contract and account sections applies only to the three job accounts. The other accounts in the general ledger

should be those required for the business according to the usual classification of assets, liabilities, capital, income and expense.

Illustrative Journal Entries. In order to illustrate the operation of the system, a typical form of journal entry is given for each of the usual transactions, but it must, of course, be understood that many of these entries are not made in the general journal, but are made in other books of original entry to be described below. Each contract or job should be given a number or a distinctive name, and all three job accounts should carry the number or name. When in the following journal entries reference is made to the profit and loss account, the individual profit and loss account for the particular job in question is meant, and the general profit and loss account of the contractor's business as a whole is not in any way involved. For convenience the job numbers or names are omitted in these entries and the following abbreviations are used:

P. & L.—Job profit and loss account.

Cont.—Contract section of the account.

Acct.—Financial or accounting section of the account.

1. Owner (cont.) \$.....
 P. & L. (cont.) \$.....
 To record amount of contract upon its execution.

This entry is made in order to set up the contractual or contingent asset consisting of the amount of the contract, which is offset by a credit for the contingent income on the contract which, of course, will be reduced by the costs of construction. When an architect's special order is issued increasing the amount of the contract, an entry in the same form is made. An architect's certificate, canceling part of the work and thus reducing the contract, would be recorded by a debit to profit and loss and a credit to the owner.

2. P. & L. (cont.) \$.....
 Sub-contractors (cont.) \$.....
 To record amount of sub-contract upon its execution.

This entry is made upon the signing of each sub-contract, in order to record the contingent or contractual liability to sub-

contractors, with an offsetting debit to profit and loss, in order to contrast the cost of construction against the contingent income represented by the amount of the contract with the owner. A subsidiary ledger for individual sub-contractors' accounts is described below. The job account for sub-contractors controls this subsidiary ledger. As contractor's special orders increasing or reducing the work to be done by sub-contractors are issued, entries are made to show the increase or reduction. An entry to record an increase would be in the form of the present entry, while one to record a decrease would be a debit to sub-contractors and a credit to profit and loss.

3. Owner (acct.) \$.....
 P. & L. (acct.) \$.....
 To record architect's certificate No.... covering the payment on the contract.
 P. & L. (cont.)
 Owner (cont.)
 To record the reduction of the contractual amount due from the owner on account of architect's certificate No.....

Contractor's requisitions to the architect are not recorded upon the books because there is no assurance that the amount requisitioned will be approved by the architect, and to record them in advance of approval would in many cases necessitate adjustments of the amount. There is no danger of overlooking these requisitions, because they are of such importance in the contractor's office that they will usually be followed up without reminder from the accounting department. A copy of the requisition should be kept on file in the accounting department, and, if it is thought advisable, a memorandum note of it can be made in the account section of the owner's account.

The issuance of the architect's certificate, however, requires an entry in the accounts, because it creates a current account receivable from the owner and it involves a reduction of the total amount ultimately to be received from him on the contract. Consequently, the above entries are made to set up the financial or current account re-

ceivable and to record the reduction of the contractual amount receivable.

4. Cash (or other asset) \$.
 Owner (acct.) \$.
 To record payment by the
 owner on architect's cer-
 tificate No.

This entry cancels the account receivable from the owner when he pays cash, gives a note, or otherwise settles the current charge against him.

5. P. & L. (acct.) \$.
 Sub-contractors (acct.) .. \$.
 To enter approved requisition by sub-contractor.
 Sub-contractors (cont.)
 P. & L. (cont.)
 To record the reduction of
 the contractual amount
 due to the sub-contractor
 on account of approved
 requisition.

When a sub-contractor's requisition has been approved, a current liability is created and the above entry records it in the financial or account sections of the sub-contractors' controlling account and the job profit and loss account. Some contractors, as a matter of precaution, do not make this entry but record only the payments to sub-contractors, the feeling being that it might be unwise to record a liability of this sort in advance of its payment. While it is true that claims of sub-contractors are contingent upon satisfactory performance on their part and subject to offsetting charges of various kinds, there seems to be no reason why a liability which actually exists should not be recorded on the books.

The second part of entry 5 is made to record the reduction of the contractual amount ultimately to be payable to the sub-contractor by the amount of his approved requisition. The reason underlying this entry is the same as that for the second half of journal entry 3.

6. Sub-contractors (acct.) \$.
 Cash \$.
 To record payment of sub-
 contractor's approved
 requisition.

If the sub-contractor's requisition is not paid in cash but is settled by a note, the

credit would be made to notes payable. These notes are sometimes called "merchandise notes." All such notes payable to all sub-contractors, regardless of the jobs on which they originate, should be carried in one liability account, but they should not be included with notes payable to banks or other persons. No purpose would usually be served by having a separate account in the general ledger for all of the sub-contractors' notes payable on each job.

The details of these notes payable as they are issued are noted on a sub-contractors' notes register to be described below. It should, of course, be noted that the payment to the sub-contractor would not be the full amount of his approved requisition if the books showed charges incurred by the contractor on his account.

7. P. & L. (acct.) \$.
 Cash \$.
 Payment of expenses ap-
 plicable to the job.

The above entry would be made if the contractor's business were on a cash basis. If his general accounts are arranged to record liabilities as they are incurred by means of a purchase journal or a voucher register, the charge to the job profit and loss account will be made from this purchase record, and the credit will be to a liability account for the approved vouchers or invoices. Regardless of whether the credit is to cash or to a liability account, the debit is made to the account section of the job profit and loss account, in order to record the direct charge incurred by the contractor.

8. P. & L. (acct.) \$.
 Expense Accounts \$.
 To distribute overhead..
 charges to the job.

The above entry is made for the purpose of distributing to the job the portion of the contractor's overhead expense accounts applicable thereto. The selection of a proper basis for the distribution must depend upon the circumstances of each case. A discussion of the various bases would be somewhat beyond the scope of this article.

If the above plan of journalization is carried out, it will be found that at the

completion of the job the contract sections of the three job accounts will show no balances. This is proper because upon completion of the work no contractual rights or obligations remain. The account section of the owner's account will be closed when he pays the last certificate or other charge against him. The account section of the sub-contractors' account will be closed when the last payment to sub-contractors is made. The account section of the job profit and loss account will remain open and its balance will show the profit or loss actually made upon the contract. That balance will then be closed into the general profit and loss account of the business at the close of its fiscal period.

Books and Records. In presenting the foregoing typical journal entries, attention was invited to the fact that many of the transactions would not be recorded through the general journal but would be entered in various other books of original entry. Reference has also been made to the fact that the job account for sub-contractors is a controlling account. The following is a list of the principal books required in the proposed system:

General Ledger. This ledger may have an ordinary ledger ruling, the only modification of it being the division of the three job accounts as explained above. In this ledger there should be kept all of the accounts needed by the business in addition to the three job accounts for each contract.

Sub-contractors' Ledger. For this book, which should be in loose-leaf form, a special ruling is suggested below.

Cash Book. The cash book should not be a loose-leaf record, but should be a bound book. A special form for it is described below.

Cash Analysis Book. This should be a bound book with special rulings indicated below.

General Journal. For this book a four-column journal is required in order to provide a debit and a credit column for each of the two sections of the job accounts, namely, the contract section and the account section. The principal entries in the journal, apart from the usual opening, closing, and adjusting entries, are made to record the execution and alteration of contracts with the owner, and to charge him with architect's certificates. A journal voucher should be prepared for each journal entry so that the evidence for the entry will be preserved. Such a voucher should include, for example, a copy of the architect's certi-

cate or special order, or any other document upon which the journal entry is based.

Voucher Register. This register, or a purchase journal if the voucher system is not to be used, is the ordinary form in commercial use, and is designed to record all the expenses which are not directly chargeable to jobs or which cannot conveniently be handled through the cost book described below.

Sub-contractors' Notes Payable Book. This is a note register having a column for each job in order to get the debits to the account sections of the sub-contractors' accounts.

Cost Book. This is the most important book in the system. It shows the cost on the basis of sub-contracts let plus contractor's expenses, and it presents current comparisons between estimates and costs. The form will be described below.

Because of limited space and for the further reason that the forms are not intricate, typical forms for the various books of account listed above will not be shown, but the rulings and use of each book will be briefly described.

General Ledger. No comment in addition to that already given in the preceding section is required concerning the use of the general ledger.

Sub-contractors' Ledger. For this ledger a loose-leaf sheet with three money columns is suggested. The first of these columns is to be used for the contract section of the account; black ink entries representing sub-contracts executed and additions to them; and red ink entries representing cancellations, and reductions on account of approved requisitions or payments. The remaining two columns are to record the debits and credits in the account section.

Each sub-contract should have a sheet. Where one sub-contractor has more than one contract on a job, all of the sheets representing those sub-contracts should be placed together under the name of the sub-contractor. All of the sub-contract accounts on each job should be grouped together and arranged alphabetically according to the names of sub-contractors. If, therefore, one sub-contractor has contracts on more than one job, his accounts will appear in more than one place in this ledger; and in order to determine the entire amount due to him at any time on all jobs together, it will be necessary to look for his account under each job on which he may

have contracts. This, however, is not inconvenient in practice because settlements will almost invariably be made on the basis of specific sub-contracts, each of which will be represented by a single account.

Cash Book. This should be a bound book showing on the debit side the date, folio, name, and particulars, followed by columns to show:

1. Net Cash
2. Interest and Discount
3. Owners
4. Notes Payable
5. Private Ledger
6. General Ledger

The operation of this side of the cash book does not require any special comment.

On the credit side of the cash book will be shown first the date, check number, folio, name, and voucher number. Then will follow columns to show:

1. Net Cash
2. Interest and Discount
3. Vouchers Payable
4. Sub-contractors
5. Job Pay-rolls
6. Sub-contractors' Notes Payable
7. Private Ledger
8. General Ledger

At this point it is necessary to explain the system of vouchers. There are three main groups of vouchers. The first consists of the ordinary vouchers of the business, covering expenses which are not directly chargeable to jobs and thus are not entered in the cost book to be described below. An example of such a voucher would be one for the purchase of office furniture or one for the payment of office rent. Another group of vouchers is known as general ledger vouchers. They cover principally payments on account in the sub-contractors' ledger, payments of sub-contractors' notes payable, and any cash payments which are chargeable directly to the private or general ledger for items which it is not desired to pass through the ordinary voucher register. The third group of vouchers are the job vouchers covering items chargeable directly to jobs. These vouchers support entries in the cost book to be described below, and thus they are needed for job pay-rolls. The latter are

the only job vouchers which may be expected to appear in the cash book, because generally speaking the only cash payments directly chargeable to jobs are for job pay-rolls. The job vouchers will be described in connection with the cost book in a succeeding section.

The only columns on the credit side of the cash book requiring comment are those for sub-contractors and for job pay-rolls. The debits for payments to sub-contractors are not posted from the cash book, but these payments are entered and analyzed by jobs in the cash analysis book described below. The debits for job pay-rolls are not posted from the cash book, but these payments are entered in the cost book. The credits for these last two items are, of course, included in the net cash column, the total of which is credited to the cash account in the general ledger.

Cash Analysis Book. This is merely a columnar book showing the date, check number, voucher number, name, and amount of each payment to sub-contractors, the payments being summarized by jobs through the use of a column for each job. The total of the amount column, which represents the total credit to cash, is not posted from the cash analysis book, because these payments are included in the total cash payments shown by the cash book, from which, as explained above, the total credit to the cash account is secured. The total of each job column, representing the total payments to sub-contractors on each job, is posted to the account section of the sub-contractors' controlling account for the job in the general ledger. Each payment is debited in detail to the sub-contractor's individual account in the sub-contractors' ledger.

General Journal and Voucher Register. The use of these books was sufficiently described above in connection with the listing of the books used in the system.

Sub-contractors' Notes Payable Book. This is merely a record of notes given to sub-contractors. The amount of each note is debited to the account section of the individual account in the subsidiary ledger for sub-contractors. By the use of one column for each job, the total notes given to all sub-contractors on each job is readily

secured for posting to the account section of the controlling account in the general ledger for sub-contractors on each job.

Cost Book. This book is not a voucher register in the sense that it eliminates creditors' accounts, because as shown in the foregoing description each sub-contractor has a ledger account. The cost book is a purchase journal or invoice register containing many entries which would ordinarily be put through the general journal and showing much statistical information concerning the cost of jobs analyzed according to the items used in making up the bids. A separate section of this book is to be used for each job, and in this section all job vouchers are entered numerically. The book shows the voucher number, date, and name, and contains the following columns:

1. Total
2. Contracts
3. Invoices
4. Pay-rolls
5. Requisitions
6. Total Cost

(The total cost column is analyzed by the use of as many columns as are necessary to show the cost per each item on the bid. For example, there might be one column for excavating, one for foundations, one for rubble, one for masonry, and so on. The total of these columns must, of course, equal the total of column 6.)

7. Owner (acct.)
8. Sub-contractor (cont.)
9. Sub-contractor (acct.)

The fundamental idea underlying this cost book is to record the cost on the basis of sub-contracts let instead of on the basis of financial obligations incurred or payments made to sub-contractors. At the top of each subsidiary column described in connection with column 6, that is, each column representing an element of cost, there should be placed the estimated amount per the contractor's bid. This estimated amount should, of course, be changed to reflect any increase or reduction by reason of the architect's special orders. Used in this way, a comparison of the total of each column with the estimated amount at its top will indicate clearly whether or not the cost is being kept within the estimate. An incidental feature of this use of a cost book is that all documents and vouchers

pertaining to the job can conveniently be filed together under a series of job voucher numbers. Each job voucher should have a printed cover, on the inside of which should be attached a copy of the sub-contract, a copy of the contractor's special order, the approved requisition by the sub-contractor, invoices for materials and supplies, freight bills, job pay-rolls, or any other data explaining the entry. The indexing of these vouchers is similar to that used in connection with an ordinary voucher system.

The items entered in the total column are credited to the contract section or to the account section of the account with the proper sub-contractor, as the case may require. The total of this column is not to be posted, but is used merely for checking the cross-footing.

The total of column 2, "Contracts," is debited to the contract section of the job profit and loss account, and credited to the same section of the sub-contractors' controlling account.

The total of column 3, "Invoices," is debited to the account section of the job profit and loss account, and credited to the same section of the sub-contractors' controlling account. This column is required in order to show in the cost analysis columns those items of cost which consist of materials and supplies or service purchased from persons other than sub-contractors. For example, the purchase of an odd lot of cement or the payment of a freight bill becomes part of the cost of the job although it may not directly affect the account of a sub-contractor. These purchases may be for cash or they may be on credit, but in either event they are recorded through the cost book in order to include them in the analyzed cost. Consequently, in the sub-contractors' ledger there must be a summary account for these purchases. If they are largely on a cash basis, one account may be kept for all of them, each payment being entered opposite the credit for the individual item. For those purchases which are on credit, a separate account with the creditor should be set up in the sub-contractors' ledger and handled as if the creditor were a sub-contractor.

The total of column 4, "Pay-rolls," is charged to the account section of the job

profit and loss account but is not credited to any account. This follows from the fact that the job pay-rolls are entered in the cash book as described above, and the necessary credit to the cash account is made from the cash book.

Column 5, "Requisitions," is designed to record approved requisitions made by sub-contractors. As these requisitions are on account of sub-contracts already executed and included in the cost, the items in column 5 are not repeated in column 6. The total of column 5 is debited to the account section of the job profit and loss account, and credited to the same section of the sub-contractors' controlling account. In order to record the decrease in the contractual liability to sub-contractors, this total is also debited to the contract section of the sub-contractors' controlling account, and credited to the same section of the job profit and loss account.

In column 6, "Total Cost," are shown all of the items entered in columns 2, 3, and 4. The individual items in this column and the total of it are not posted to any account, because they present statistical information. As mentioned in a preceding paragraph, this total cost is analyzed by adjoining columns, each of which represents a single element of cost corresponding with an item used in preparing the contractor's bid.

Column 7, "Owner," provides a place for recording charges against the owner other than the original contract (which should be posted through the general journal). An illustration of such a charge might be a freight bill paid for delivery of material at the job belonging to the owner, or for service rendered to the owner on work not connected with the contract, such, for illustration, as a minor repair job made by men whose pay is taken care of in the job pay-roll. This column and columns 8 and 9 combine a bill book feature with the cost book. The items in column 7 appear in column 1, "Total," and in columns 3, "Invoices," or 4, "Pay-rolls." Since the items in columns 3 and 4 are debited to the account section of the job profit and loss account, it is necessary to credit that ac-

count with the items in column 7, "Owner," when the charge for those items is made in the account section of the owner's account. This credit and charge may be in monthly totals or it may be for each individual item, depending upon the number of entries involved.

In the same way that charges on account of the owner may be incurred during the process of construction, similar charges may be incurred against a sub-contractor. They are recorded through the cost book by charging the contract or account section of the sub-contractors' controlling account, as the case may require, and crediting the corresponding section of the job profit and loss account.

Credit items, such for example, as a credit for returned cement bags, can conveniently be put through the cost book in red ink. The cross-footing of the cost book is shown in the following key, each number representing the total of the column carrying the respective number:

$$1 = 2 + 3 + 4 + 5$$

$$1 = 5 + 6 + 7 + 8 + 9$$

6 = Total of all subsidiary and adjoining columns which analyze the cost of items shown in the bid.

Summary. Without going minutely into detail, the foregoing outline of the system of accounts for general contractors indicates the main structure of the system and the general methods of its use. It will be seen that the basic and underlying idea is the differentiation between contractual or contingent and financial or actual rights and obligations. Combined with this basic idea is the analysis feature in the cost book which makes it possible at all times to compare the cost to date with the estimated cost on each element of work represented by an item in the contractor's bid. The indication of contractual rights and obligations on the general books of account is secured through having three general ledger accounts for each job, each account being divided into a contract section and an account section. The subsidiary books and records are designed to carry this basic idea into effect.

A PROBLEM IN FEDERAL TAXES

BY ERIC L. KOHLER*

A PROBLEM, involving some points in the computation of the tax on individual incomes, and its solution are given below. Some of the more important points covered are: the income of a minor child; the income from a trust; status of taxes paid by corporations for their stockholders; date on which dividends are taxable; con-

tributions and gifts; and personal versus business expenses.

From the following analysis of the personal account of D. E. Barnes taken from his books for the year ending December 31, 1920, together with the information attached, prepare the necessary working papers for his income tax return.

D. E. BARNES

ANALYSIS OF PERSONAL ACCOUNT—CALENDAR YEAR 1920		
Line		
1.	Balance, January 1, 1920.....	\$1,845,476.10
2.	Household Expense.....	\$31,649.17
3.	Withdrawals by Wife.....	4,580.00
4.	School Expenses—Arthur.....	845.20
5.	School Expenses—Harriet.....	768.84
6.	Salary—Private Secretary.....	2,800.00
7.	Salary—Chauffeur.....	1,500.00
8.	Automobile Expenses.....	2,161.25
9.	Personal Withdrawals and Expenses.....	12,456.65
10.	Payment to Trust in Arthur's name.....	15,000.00
11.	Contributions to Educational and Charitable Corporations.....	123,173.36
12.	Gifts to Persons.....	1,450.00
13.	Local Benefit Taxes.....	867.40
14.	Personal Property and Real Estate Taxes.....	1,180.58
15.	1919 Federal Income Tax.....	40,382.91
16.	Interest on Personal Loans.....	581.10
17.	Interest on Loans to carry Tax-free Municipals.....	218.08
18.	Bad Debts Written Off.....	1,100.00
19.	Compensation as Trustee for G. L. B. Estate.....	1,000.00
20.	Salary—Barnes and Roche.....	10,500.00
21.	Trading Profits.....	2,135.13
22.	Profits from Sales of Stock.....	22,475.33
23.	Profits from Sales of Bonds.....	2,231.00
24.	Income from Estate of G. L. Barnes.....	14,326.50
25.	Stock Dividends.....	2,200.00
26.	Cash Dividends.....	83,467.50
27.	Municipal Bond Interest (principal \$78,500).....	3,374.25
28.	Corporation Bond Interest.....	27,546.81
29.	Directors' Fees.....	130.00
30.	Distributive share of Profits—Barnes and Roche.....	137,891.46
31.	Rentals.....	4,884.17
32.	Interest on Liberty Bonds.....	3,725.00
33.	Balance, December 31, 1920.....	1,916,186.71
		<u>\$2,159,132.25</u>
		<u>\$2,159,132.25</u>

* Certified Public Accountant; Associate Professor of Accounting, Northwestern University, Chicago, Ill.

DETAILS OF ACCOUNTS

Line 2. Among the household expenses were found luxury taxes of \$252.

3. His wife has an independent income consisting of dividends from stocks in her own name not included in her husband's accounts. These dividends for 1920 amounted to \$2,540. Should she file a separate return, and, if so, should the personal exemption be split between husband and wife?

4, 5. There are two children, Arthur, 19, in the university, and Harriet, 16, at boarding school. The latter owns corporation bonds in her own name, interest received being \$122.50.

6. The secretary's duties include the

handling of Mr. Barnes' correspondence, keeping the books, etc., all of which are regarded as business duties.

7, 8. The automobile is used principally by Mr. Barnes as a means of transportation between Highland Park and Chicago, but he will claim no deduction for expenses thereon.

9. In personal withdrawals were found payments to brokers, Anson, Jones and Company, totaling \$10,000. The brokers' monthly statements for the year were examined and none of their transactions therein had been recorded on Mr. Barnes' books, nor could the balance on December 31 be found among the accounts receivable or investments. The monthly statements were summarized as follows:

Balance, January 1, 1920.....		\$11,467.21
Cash Received During Year.....		10,000.00
Stocks Purchased.....	\$124,673.80	
Stocks Sold (cost \$132,640.70).....		143,881.69
Transfer Tax on Sales.....	48.00	
Commissions on Purchases and Sales.....	849.50	
Interest on Monthly Balances.....		523.16
Dividends Received.....		4,840.00
Balance, December 31, 1920.....	45,140.76	
	<u>\$170,712.06</u>	<u>\$170,712.06</u>

COMPUTATION OF THE TAX

The tax payable is computed as follows:

Net Taxable Income, as above, subject to surtaxes.....		\$260,316.72
Less—Credits for Normal Tax purposes:		
Dividends.....	\$108,888.50	
Personal Exemption.....	2,200.00	111,088.50
Income subject to Normal Tax.....		<u>\$149,228.22</u>
Normal tax:		
4% on first \$4,000 above credits.....		\$160.00
8% on balance of \$145,228.22.....		11,618.26
Surtax:		
Surtax on \$200,000.....		77,510.00
60% of balance of \$60,316.72.....		36,190.03
Total Tax.....		<u>\$125,478.29</u>
Less—Tax paid at Source (2% of \$1,112.50).....		22.25
Total Tax Due.....		<u>\$125,456.04</u>

Also in personal withdrawals were found taxes on club dues amounting to \$78.66.

10. A trust in Arthur's name is being created which, it is expected, will amount eventually to \$100,000 by the time he is 21. On December 31, 1920, the fund totaled \$53,475.18, of which \$2,045.26 represented interest earned during 1920. For the next four years the interest derived must be added to the principal of the fund, and at the end of that time whatever annual income is earned may be withdrawn or accumulated by the son. The Equitable Trust Company is the trustee. Is this interest taxable? If so, to whom?

21. Trading profits refer to transactions in corn, oats, ribs, etc., on the board of trade. The gross profits on these transactions amounted to \$3,450, from which has been deducted, according to the invoices from the commission house, taxes of \$546.80, commissions of \$682.37, and expenses of \$85.70. The brokers were Symmes and Roche.

22. An inspection of the sales of stock shows that these have been correctly recorded with the exception of Cumberland Preferred, 100 shares of which were sold for 186½ (par \$100) during the year and profit taken on the basis of cost price which was 100 in 1908, whereas on March 1, 1913 this stock, which is listed, had a bid and asked price of 121-123. There is every evidence that the exchange quotation represented the fair market value on that date. The total selling prices were \$209,470.60; the cost \$186,995.27.

23. All bonds sold were acquired after March 1, 1913, the selling price being \$23,479 and the cost \$25,710.

24. Mr. Barnes and his brother, F. L. Barnes, are joint income beneficiaries of the estate of G. L. Barnes. The estate's assets consist exclusively of stocks, and Mr. Barnes' portion consists of cash dividends, \$14,500, less his portion of the trustee's current expenses, \$173.50.

25. The stock dividends were all declared and received in 1920.

26. Certain cash dividends, payable December 30, 1920, and received January 5, 1921, are not included in the total of \$83,467.50. These amount to \$2,470. Mr. Barnes owns 100 shares of the Central

Savings Bank Stock, on which the bank paid a tax of \$1.61 per share during 1920.

28. Interest on bonds with a tax-free covenant and included here amounted to \$1,112.50.

30. The partnership of Barnes and Roche is a trading business to which Mr. Barnes devotes about one-half of his time. Their fiscal year ends October 31, and the amount credited as his distributive interest represents his share of the profits for the year ending on that date in 1920. The partnership owns stock in a corporation, and Mr. Barnes' share of the dividends during the year were: cash dividends \$3,450; stock dividends \$6,000, declared October 1, 1919, and payable (and actually received) on November 12, 1919. According to the statement of the corporation, \$3,300 represents 1919 earnings, and \$2,700 represents a distribution of 1918 earnings.

31. Rentals is a net figure and is made up as follows: gross rentals from factory building occupied by American Boiler Pipe Company \$7,500; depreciation \$2,100; taxes \$457.20; repairs and up-keep of property \$58.63.

32. Interest on Liberty bonds is the income from \$40,000 of the second loan, and \$50,000 of the fourth loan. Of the latter, \$37,500 were originally subscribed for.

EXPLANATIONS OF ADJUSTMENTS

1. Income of minor child. Article 403, revised, states that income of a minor child, if appropriable by the parent, must be included in the parent's return. Proof of the child's emancipation rests with the parent's excluding the child's income. A child is not assumed to be emancipated until he becomes of age (usually 21). This provision is distinct from the claim for dependents where the age limit is 18.

2. Income from the broker's account is, of course, taxable income, no matter whether or not actually received. The income illustrated here is characteristic of margin accounts. The tax and commissions have been deducted direct from the sales price, as both are computed thereon. Interest and dividends are allocated to their respective places in the tax return. Brokers are required to furnish information regard-

SOLUTION TO PROBLEM
D. E. BARNES
ADJUSTMENTS OF GROSS INCOME AND DEDUCTIONS—Calendar Year 1920

	Per Books		ADJUSTMENTS		EXCLUSIONS FROM RETURN		TAXABLE INCOME AND ALLOWABLE DEDUCTIONS		LINE No. IN RETURN
	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit	
Household Expenses.....	\$31,397.17				\$31,397.17		\$252.00		K-2
Withdrawals by Wife.....	4,580.00				4,580.00				
School Expenses—Arthur (19).....	845.20				845.20				
School Expenses—Harriet (16).....	768.84		(1)	\$122.50			2,800.00	\$122.50	G-1 B-5
Salary—Private Secretary.....	2,800.00								
Salary—Chauffeur.....	1,500.00				1,500.00				
Automobile Expenses.....	2,161.25				2,161.25				
Personal Withdrawals and Expenses.....	12,456.65		(2)	15,706.65	12,377.99		78.66		K-2 H-a D G-3
Payment to Trust.....	15,000.00				15,000.00			4,840.00	
Contributions.....	123,173.36				77,235.12			10,343.49	
Gifts.....	1,450.00				1,450.00			523.16	
Local Benefit Taxes.....	867.40				867.40				
Property Taxes.....	1,180.58						45,038.24		M
1919 Federal Income Tax.....	40,382.91				40,382.91				
Interest on Personal Loans.....	581.10						1,180.58		K-2
Interest to carry Municipals.....	218.08				218.08		581.10		K-1
Bad Debts Written Off.....	1,100.00						1,100.00		K-4 B-4 B-4 G-5
Compensation as Agent.....		\$1,000.00						1,000.00	
Selling Barrios and Roche.....		10,500.00						10,500.00	
Trading Profits.....		2,135.13						2,135.13	
Profits from Sales of Stock.....		22,475.33				\$2,200.00	2,231.00	20,275.33	D C
Profits from Sales of Bonds.....							173.50		H-b
Income from Estate G. L. B.....		14,326.50						14,500.00	
Stock Dividends.....		2,200.00							
Cash Dividends.....		83,467.50	(3)	\$161.00	(3)	161.00	161.00	80,098.50	K-2 H-a
Municipal Bond Interest.....		3,374.25	(4)	2,470.00					F-a
Corporation Bond Interest.....		27,546.81	(5)	22.25					G-1 G-4 B C H-b E
Directors' Fees.....		130.00							
Profits—Barnes and Roche.....		137,891.46							
Rentals.....		4,884.17							
Interest on Liberty Bonds.....		3,725.00							
Excess of Income over Expenditures.....	(a)	70,710.61							
Net Adjustments.....			(b)	18,321.40					
Net Exclusions.....									
Net Taxable Income.....						(c)	171,284.71		N
	\$313,656.15						260,316.72		
							\$317,428.63	\$317,428.63	

ing customers on Form 1100 when called upon to do so by the Commissioner.

3. Taxes paid by corporations (usually banks) for their stockholders are regarded as additional dividends to the stockholders and are also deductible by the stockholders as taxes. Dividends not being subject to normal taxes, the practical effect of this provision is a saving of the normal tax as applied to the tax paid by the bank. In this particular case the saving is 8% of \$161, or \$12.88.

4. Dividends are taxable to the stockholder as of the date set apart for him.

5. The 2% of the interest on tax-free

covenant bonds constitutes additional interest to the individual, but rather than being a deductible expense as in the case of bank stock taxes, the amount may be credited against the tax payable (line 29 of Form 1040 revised). The saving effected in the taxes to be paid is \$22.25 minus 68% of \$22.25, or \$7.12.

Line 3. His wife should file a separate return. No saving on normal taxes would be effected by splitting the personal exemption.

Line 10. Income from the trust is not taxable to the creator thereof if the trust is irrevocable.

A WHALE OF A PROBLEM

THE following problem from Lorin F. Deland's interesting book, "Imagination in Business," is inserted in the hopes that it may afford a topic for light discussion before the executive conference begins.

Two young men in Indiana conceived the idea that there would be a fortune for them if they could secure a whale, load him on a large special car, and carry him over the United States, giving exhibitions in every town and city, while the great fresh-water public saw the whale at twenty-five cents a head.

They investigated the idea thoroughly, found it practical, and put into the venture every last cent that both of them had saved. They had two elaborate cars constructed in the Pullman shops. They were built on the Pennsylvania Railroad pattern; one was a car of extra length, with special appliances for switching, curves, etc., and was to hold the whale. The sides of this car let down, and served as an inclined platform upon which people could walk up and view the "monster of the deep." The other car was a hotel car, and contained bedrooms and living-rooms, accommodations for their families, business office, ticket-office, safe, etc. They were really

fine cars, costing many thousands of dollars.

The young men even went so far as to have all their printing prepared, giving a thrilling account of the capture of the whale, and every detail, discreetly omitting the mention of its exact size. Thousands and tens of thousands of posters, flyers, and circulars were printed, and then the two cars started from the Pullman works in the West, bound for Boston. They arrived in the Boston & Albany yards, where they were side-tracked while the two men went down to Nantucket to arrange for the purchase of the whale. But there was no "monster of the deep."

Without a cent of money, with their families on their hands, the problem is to carry these young men through one year, making them earn enough to provide for all necessities, including car-storage, and equip them in the fall of the following year with a large whale. It is recommended as a pleasant little exercise for the imagination.

This business problem Mr. Deland solved but he has never told how. He has said, "One year later I saw the tail of a forty-five foot whale vanishing over the railroad tracks westward, where it eventually gladdened the hearts of thousands at twenty-five cents a peep."

VIEWS AND REVIEWS OF BOOKS

OUR ECONOMIC AND OTHER PROBLEMS

By Otto H. Kahn. 420 pp. George H. Doran Co.

REVIEWED BY WILLIAM M. KINGSLEY.*

Mr. Kahn's book is undoubtedly one of the most important works of its kind published in this country in the last decade. It has all the qualities a book by such an authority should have—it is broad in scope, measured in judgment, temperate in statement, and reliable in fact, and in addition it is what many such authoritative books are not—it is eminently readable. And its readability is not merely a question of style, but is greatly owing to the fact that the author writes not as the conscious expert but as a human being, genuinely concerned in his fellowmen and possessing a large vision for the future.

The work is divided into four parts—Part One, dealing with the career of Edward Henry Harriman as the last figure of a vanished epoch; Part Two, concerning business and economics; Part Three, concerning war and foreign relations; and Part Four, concerning art. Thus we have Mr. Kahn in the fourfold aspect of friend, financier, patriot, and music-lover.

II

Part One tells the life-story of a man who had reached the age of nearly fifty years without attracting any general attention and before beginning that upward ascent which made him one of the most powerful and prominent men in the country.

Harriman's success, according to the author, was due to two causes:

There was first of all the correct judgment as to the merits of a proposition and as to its outcome—a judgment marvelously clear and sure, almost infallible. There was, secondly, the iron determination—so conspicuously in contrast to his frail appearance—the dogged persistency in pursuing and carrying out his purpose.

*First Vice-President of the United States Trust Company, New York City.

He did not know the meaning of the word "defeat." He never "threw up the sponge." His power of will was nothing short of phenomenal; and by its exercise, coupled with his indomitable pluck and amazing brain faculties, I have seen him perform veritable miracles in the way of making people do as he wanted.

The object in itself was by no means great or important or essential to Mr. Harriman's plans. It became important to him when he found that its attainment was difficult, when he found himself confronted with obstacles and opposition. He positively loved obstacles, and the harder to surmount, the more they allured him. Difficulties, risks, dangers were not only no deterrents, but rather inducements to undertake a task.

When there was an easy way to accomplish a thing, and also a difficult way, Mr. Harriman's inclination would be to take the latter. I once told him I suspected him of purposely creating difficulties and obstacles for himself for the mere sport of overcoming them, as a keen sportsman will go out of his way to jump hurdles and fences, as a mountain-climber will test his skill and daring by deliberately choosing a difficult and dangerous ascent.

These qualities, however, have their concomitant drawbacks, as Mr. Kahn clearly shows:

Though he was lacking in the faculty of attracting men in general (I say "in general," because upon those who came close to him the spell of his personality was most potent), he did have the gift in a most marvelous degree of attracting power as the magnet attracts iron. At the time of his death, the papers were full of comments as to the vastness of the territory in which his influence was potent or controlling; but the most remarkable thing, to my mind, was not the extent of his power, but the fact that his commanding position, his control over so many undertakings, rested not on money, but on personality.

Mr. Kahn does not go into details of the story of the rise and development of the

Union Pacific under Mr. Harriman's magic guidance, but points to this fact:

In the first fiscal year following Mr. Harriman's election to the Union Pacific board the surplus earnings of the system applicable to \$107,000,000 of common stock were \$5,800,000. Today, taking the figures of the last fiscal year, the surplus earnings of the Union Pacific system (excluding the Southern Pacific), applicable to \$216,000,000 of common stock, are \$41,500,000. From the time Mr. Harriman assumed the direction of affairs to the time of his death \$127,000,000 were spent in improving the property, for three-quarters of which sum (to be exact, \$94,000,000) not one dollar of capitalization was created. The free assets held absolutely unincumbered in its treasury have an aggregate value of \$210,000,000.

Harriman's death in 1919 was the end not only of a remarkable career but, in the author's belief, coincided with the ending of the following epoch in our economic development:

His career was the embodiment of unfettered individualism. For better or for worse—personally I believe for better unless we go too far and too fast—the people appear determined to put limits and restraints upon the exercise of economic power, just as in former days they put limits and restraints upon the absolutism of rulers. Therefore, I believe, there will be no successor to Mr. Harriman; there will be no other career like his.

III

Part Two, "Concerning Business and Economics," contains ten chapters headed as follows: Strangling the Railroads; Government Ownership of Railroads; Suggestions Concerning the Railroad Problem; High Finance; The New York Stock Exchange and Public Opinion; Two Years of Faulty Taxation, and the Results; The Need for National Efficiency; The Menace of Paternalism; The Task Ahead; and Roosevelt and Business.

In "Strangling the Railroads" Mr. Kahn's chief criticism is directed against the Interstate Commerce Commission. The gist of his attack is contained in these sentences:

There is no parallel, to my knowledge, in any other country to the enactment which places our greatest industry, down to its minutest details, under the almost absolute power of seven men owing defined accountability to no one, selected

for relatively short terms and according to no particular standard of training or qualifications, and being practically free from control, restraint or appeal. But it is not so much the existence of that power, excessive though it be, of which the railroads complain. Practically all railroad men, I believe, recognize that thorough public regulation is here to stay. Many of them have come to look upon the underlying theory and principle as not only right and wise from the public point of view, but even as beneficial from the point of view of the best interests of the railroads. It is the faultiness and inadequacy of the law under which the Interstate Commerce Commission works and exercises its power and the multiplicity of masters under whom the railroads have to serve and whom they have to satisfy that constitutes the main burden of their grievances and that cries for reform.

The Interstate Commerce Commission, being at the same time prosecutor, judge and jury, combining in itself legislative, executive and judiciary functions, may assuredly be termed a negation of the root principle from which the American system of government springs. Such combination of powers in one body has been styled by James Madison "the very definition of tyranny."

Though far from holding the railroads blameless for some of the conditions with which they are now confronted, Mr. Kahn believes:

In their natural resentment and their legitimate resolve to guard against similar conditions in the future, the people have overshot the mark. The proof of the pudding is in the eating. Not less than 82 railroads, comprising 41,988 miles and representing \$2,264,000,000 of capitalization, are in receivers' hands, and the mileage of new railroad constructed in 1915 is less than in any year since the Civil War. The duration of receivership has become longer and longer, far longer than it used to be, owing to the difficulty of raising the necessary funds for the rehabilitation of the properties in the face of the growing reluctance of the public to invest in railroad securities under the existing conditions of the law and the attitude of the Commissions, and further, owing to the complications and delays resulting from the jurisdiction and views of State Commissions.

In the final paragraphs of this chapter Mr. Kahn suggests these remedies:

Railroads, being essentially nation-wide in their functions, should, as to rates and other phases of their business directly or indirectly

affecting interstate results, be placed under one national authority instead of being subject to the conflicting jurisdiction of many different States.

It is vital to our railroads and indispensable for their capacity to serve the country adequately that investors be reassured and encouraged as to the safety and attractiveness of investment in American railroad securities, all the more because of the world-wide competition for capital which, sooner or later after the close of the European war, is bound to set in.

The present lopsided structure of railroad laws ought to be demolished and superseded by a new body of laws designed to aid the railroads toward the greatest development of usefulness and service to the country, conceived upon harmonious, constructive, scientific and permanent lines. The reform of our banking and currency laws having been carried into effect, the reconstruction of our railroad laws ranks among the most pressing and vitally needed reform in the economic affairs of the country. The banking and currency legislation of 1913 affords an appropriate precedent and in many respects a parallel. The national functions and character of the railroads are largely analogous to those of the national banks. Like the national banks, so should the railroads be free, at least in essentials, from conflicting and multitudinous jurisdiction by the several States and placed substantially under Federal authority. And like the national banks, they should not only be permitted but be compelled to co-operate, and thus mobilized for the maximum extent and efficiency of service; in other words, pooling and kindred arrangements should be sanctioned, subject to the approval of the Interstate Commerce Commission. The formula and principle of the banking and currency legislation, viz., a strong, effective and controlling Central Federal Board in Washington, relieved from detail work and from certain inherently conflicting functions (which latter should be conferred upon a separate body), with Regional Boards according to geographic groupings, might prove exactly suited to railroad legislation.

In the chapter which follows the author makes a strong case against government ownership by showing:

Prior to the war, about fifty per cent of the railways in Europe were state railways; that in practically every case of the substitution of government for private operation (with the exception, subject to certain reservations, of Germany) the service deteriorated, discipline and consequently the punctuality and safety of train service diminished, politics came to be a factor in the administration, and the cost of operations

increased vastly. (The net revenue, for example, of the Western Railway of France, which in the worst year of private ownership was \$13,750,000, had fallen in the fourth year of government operation to \$5,350,000.)

While Mr. Kahn does not believe that the railroad situation can be restored just as it was before the war, he holds that:

The relinquishment of certain features of our existing legislation, the addition of others, a more clearly defined and purposeful relationship of the nation to the railroads, involving among other things probable participation of the Government in railroad earnings over and above a certain percentage, are certain to come from our experiences under Government operation and from a fresh study of the subject.

In "Suggestions Concerning the Railroad Problem" the author comes to closer grips with his subject and makes more specific recommendations. His broad program he puts as follows:

1. Let the Government exercise strong and comprehensive control, but fair and constructive, not punitive or strangling.

2. Let those features of operation, which under Government management have proved advantageous and convenient to the public, be preserved and those features of legislation and administration, which experience has shown to be unduly and unwisely hampering, be abolished.

3. Without eliminating State commissions, let their functions be so adjusted as to avoid conflict with the Federal Commission in matters of rate-making and security issues.

4. Let railroading then be thrown open to private initiative and enterprise and competition in service; make it an attractive field for capital, and, above all, for men of ability and vision.

Realizing, however, that to satisfy public opinion, a large portion of which suspects the railroads of taxing the people to pay dividends on watered stock, Mr. Kahn goes on to make further suggestions:

The valuation of the railroads, on which the Interstate Commerce Commission has been engaged for several years, will probably take a few years still to complete, and some of the resulting awards will supposedly have to be reviewed by the courts before they can become definitely established.

My suggestions, in view of these circumstances, are:

1. Until the valuations are completed, let the Interstate Commerce Commission or other authority (having first been granted exclusive power

or, at least, paramount authority in rate-making) be directed to consider the existing rates as *prima facie* fair and reasonable on the basis of existing wages and costs, subject to such adjustment of inequalities or injustices between localities and shippers as the Interstate Commerce Commission may determine. It might be better still to confer these functions on Regional Committees composed of Railroad officials and shippers, subject to the Interstate Commerce Commission's casting vote in case of disagreement.

2. If wages and cost of materials decrease pending the completion of the valuation, let rates decrease proportionately as near as may be, as determined at reasonable, not too frequent, intervals; but pending such completion, rates are not to be diminished below figures which will yield upon the existing capitalization an aggregate return equivalent approximately to that yielded from the rental now being paid by the Government for the use of the railroads, plus a fair return upon such new money as may be put into the properties. If that yield is not found sufficient to restore railroad credits and provide needed funds under the circumstances prevailing now or from time to time, let the return be made such, in the judgment of the Interstate Commerce Commission, as to accomplish that necessary purpose.

3. In the new railroad legislation about to be framed by Congress let it be precisely defined, instead of having merely a vague and unenforceable formula as heretofore, what items are to be considered by the Interstate Commerce Commission (or such regional bodies as may be appointed) in fixing rates after the termination of the temporary situation covered by suggestions 1 and 2. The principal ones among these items are, of course: Wages, cost of materials, and a return on the fair value of railroad properties at a sufficient rate to attract new capital and stimulate enterprise. It is surely not beyond the capacity of language to define with clarity what items enter into the cost of a product. The product which railroads are selling is transportation of passengers and goods. The price of the product is the rate.

In "High Finance" the author tells what finance should do to gain and preserve for itself the confidence of the public. These are his four recommendations:

1. *Conform to Public Opinion.* It must not only do right, but it must also be particularly careful concerning the appearance of its actions.

2. *Publicity.* One of the characteristics of finance heretofore has been the cult of silence; some of its rites have been almost those of an occult science.

Finance, instead of avoiding publicity in all

its aspects, should welcome it and seek it. Publicity won't hurt its dignity. A dignity which can be preserved only by seclusion, which cannot hold its own in the market place, is neither merited nor worth having, nor capable of being retained.

We must more and more get out of the seclusion of our offices, out into the rough and tumble of democracy, out—to get to know the people and get known by them.

3. *Service.* Every man who by eminent success in commerce or finance raises himself beyond his peers is in the nature of things more or less of an "irritant" (I use the word in its technical meaning) to the community.

It behooves him, therefore, to make his position as little jarring as possible upon that immense majority whose existence is spent in the lowlands of life so far as material circumstances are concerned.

It behooves him to exercise self-restraint and to make ample allowance for the point of view and the feelings of others, to be patient, helpful, conciliatory.

It behooves him to remember always that many other men are working, and have worked all their lives, with probably as much assiduous application, as much self-abnegation as he, but have not succeeded in raising themselves above mediocre stations in life, owing to circumstances not of their making.

He should beware of that insidious tendency of wealth to chill and isolate.

And he should never forget that the advantages and powers which he enjoys are his on sufferance, so to speak, during good behavior.

He should never forget that the social edifice in which he occupies quarters so desirable has been erected by human hands, the result of infinite effort, of sacrifice and compromise, the aim being the greatest good of society; and that if that aim is clearly shown to be no longer served by the present structure, if the successful man arrogates to himself too large or too choice a part, if, selfishly, he crowds out others, then, what human hands have built up by the patient work of many centuries, human hands can pull down in one hour of passion.

4. *Organize.* Business, including high finance, has too often failed to recognize in time the need, and to heed the call for changes from methods and conceptions which had become unsuitable to the time and out of keeping with rationally progressive development; that they have too often permitted themselves to be guided by a tendency toward unyielding or at any rate apparently unyielding Bourbonism instead of giving timely and sympathetic aid in a constructive way toward realizing just and wise modifications of the existing order of things.

"Faulty Taxation" points out the harmful effects of an existing system of taxation. In Mr. Kahn's opinion the four factors which, more than others, have brought about in this country the present era of economic disturbances and high prices are:

1. The urgency of the world's demand for our raw materials and manufactured articles during and since the war.
2. Inflation of credit and currency.
3. Governmental and private extravagance.
4. Faulty taxation.

The author discourses at considerable length and with great detail on three direct forms of taxation—the excess profits tax, the income tax, and the inheritance tax.

The "Need for National Efficiency" is an address which was delivered during the war and is a call for whole-hearted patriotism, and service by those unable to bear arms, taking the form of recommendations of thrift and a plan for greater use of business men in governmental affairs.

The "Menace of Paternalism" voices a strong protest against various political panaceas and gives a solemn warning in words, the importance of which the author emphasizes as follows:

Nothing is easier to start, nothing moves faster when once started, than economic fallacies, especially when to their natural speed is added the impulse of a glittering and facile idealism which holds out to the world surcease from many of those troubles with which mankind has grappled since its progenitors left the Garden of Eden.

Nothing is harder than for sober unvarnished truth, loaded down with the weight of the realities of existence, to catch up with those fallacies. It invariably does in the end, but meanwhile the fallacies on their long start and rapid flight may have wrought vast harm, as we see exemplified in Russia.

Mr. Kahn's conclusion is:

That nation which will best know how to combine the dictates of social justice with incentive and protection to individual effort will secure the prize of world leadership no less than of opportunity, well-being and contentment for the masses of its own people.

Probably the most valuable and stimulating chapter in the book is that entitled "The Task Ahead." Starting with the keynote of duty to the country, Mr. Kahn

takes up in turn such matters as governmental administration, trade, the railroads, taxation, art, capital and labor, and finally summing up the citizen's part in the general task, America.

On nothing does he write with such clarity and vigor as on the perennially vexed question of capital and labor; for example the following paragraph:

The primary cause of poverty is underproduction. Furthermore, lessened production naturally makes for high costs. High wages accompanied by proportionately high cost of the essentials of living don't do the worker any good. And they do the rest of the community a great deal of harm. The welfare of the so-called middle classes, *i. e.*, the men and women living on moderate incomes, the small shopkeeper, the average professional man, the farmer, etc., is just as important to the community as the welfare of the wage-earner. If through undue exactions, through unfair use of his power, through inadequate output, the workman brings about a condition in which the pressure of high prices becomes intolerable to the middle classes, he will create a class animosity against himself which is bound to be of infinite harm to his legitimate aspirations. Precisely the same, of course, holds true of capital.

The main principle of Mr. Kahn for the solution of the labor difficulty is the principle of the Golden Rule, holding the formula "that, first labor is entitled to a living wage; after that, capital is entitled to a living wage; what is left over belongs to both capital and labor, in such proportion as fairness and equity and reason shall determine in all cases."

The application of the formula is, of course, difficult and complex, but:

It seems to me that, in the main, right-thinking men of capital and labor would concur in the following points:

1. The workman is neither a machine nor a commodity. He is a collaborator with capital.
2. The worker's living conditions must be made dignified and attractive to himself and his family.
3. The worker must be relieved of the dread of sickness, unemployment and old age.
4. The worker must receive a wage which not only permits him to keep body and soul together, but to take proper care of his wife and children, to have for himself and them a share of the comforts, interests and recreations of life, to lay something by, and to be encouraged in the practice and obtain the rewards of thrift.

5. Labor, on the other hand, must realize that high wages can only be maintained if high production is maintained. The restriction of production is a sinister and harmful fallacy, most of all in its effect on labor.

IV

Part Three, "Concerning War and Foreign Relations," takes up in a series of short, strongly patriotic chapters such matters as "France," "When the Tide Turned," "Great Britain," "An Open Letter," "A Golden Book of Soldiers' Letters," "America and the League of Nations," and "A Letter to an Englishman."

V

Part Four, "Concerning Art," also consists of short chapters. It shows Mr. Kahn in his congenial rôle of music patron, handling such themes as "Some Observa-

tions on Art in America," "An Experiment in Popular Opera," and "Art and the People." In the concluding chapter he observes:

Maecenases are needed for the dramatic stage, the operatic stage, the concert stage; for conservatories and art academies; for the encouragement and support of American writers, painters, sculptors, decorators, etc., in fact, for all those things which in Europe have been done and are being done by princes, governments and communities.

Here is a vast opportunity for cultural and helpful work. To strive toward fostering the art life of the country; toward counteracting harsh materialism; toward relieving the monotony and strain of the people's every-day life by helping to awaken in them or to foster the love and the understanding of that which is beautiful and inspiring, and aversion and contempt for that which is vulgar, cheap, and degrading, is a humanitarian effort eminently worth making, and offering, moreover, every prospect of not being attempted in vain.

COST ACCOUNTING—PRINCIPLES AND PRACTISE

*By John P. Jordan and Gould L. Harris.
v, 529 pp. The Ronald Press Company*

REVIEWED BY EDWARD P. MOXEY*

This work is a notable contribution to a subject on which much has been written and much more said within recent years.

An analysis, however, of the existing material on cost accountancy, discloses the fact that it falls mainly into two classes: first, those contributions which have to do with descriptions of methods in particular plants, and second, more or less exhaustive treatises, consisting largely of a combination of methods from several plants. Complete and systematic presentation of the subject itself has been lacking to a great extent until the advent of this book.

The authors' method of presentation divides itself naturally into two parts. The first part gives a connected account of cost procedure, in which the elements entering into cost are considered in the order

of material, labor, and overhead. This part of the work finds its culmination through expression in the accounts and journal entries, and by expense burden, and financial statements.

Quotation from a book of this sort is difficult but the following will show the steps in the progress of cost figures:

All purchase costs incurred must go through a voucher register as the hook of original entry. That is, all purchases of labor, material, or any other item must go through the voucher register and be distributed thence to the specified control accounts.

All labor, after being first charged to certain pay-roll accounts, is distributed to other accounts through the medium of the pay-roll analysis, backed up by time cards.

All purchases of material are distributed as follows:

1. That which goes into stock and is subject to requisition, is charged to certain material

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inventory accounts, which in turn are analyzed by the stock records.

2. That which goes direct into expense accounts will be charged in the voucher register to the Expense Ledger account, which in turn is further analyzed and distributed to the various expense accounts by use of expense debit slips.

3. Miscellaneous expense items covering many kinds of intangible amounts paid for services, such as Legal Service and Mechanical Service, and many other items which are chargeable to expense accounts will also be charged to the expense ledger and distributed through the medium of the expense debit slip as in (2).

4. Certain items, such as Insurance, Taxes, etc., which are prepaid in considerable volume, should be charged to so-called "Prepaid" accounts subject to monthly distribution through the medium of standard journal entries.

5. Certain items, such as interest, and other items which are chargeable direct to certain expense accounts, but which are not of sufficient volume to warrant a column, are posted directly from the voucher register, rather than run through the Expense Ledger account. Such items are properly administration items which it is not desirable to put through the cost department.

6. In addition to the foregoing, journal entries are made to distribute the sales which have been entered on the sales records.

The second part of the work has to do with the use of cost records and the information contained therein, the steps necessary in the installation of a cost system, and other matters involving special points relating thereto. There is included in this portion a comprehensive discussion on the subject of interest on invested capital, on

which the authors reach no definite conclusion, the chapter ending with a statement of the arguments for and against the inclusion of this element as an item of cost. The chapter devoted to graphic production control well might have been enlarged, in view of the increasing importance of this subject in the minds of cost accountants.

The book has attached to it an appendix containing a number of cost accounting problems taken from various C. P. A. examinations.

As a book it furnishes a happy combination of the practical engineering methods of control with theoretical presentation from the standpoint of the educator, with the result that we have both the "why" and the "how" of cost-finding. The book should appeal to the practical man of affairs and the accountant on the one hand, and to the university teacher and student on the other.

The appeal to the former class is effected through that portion which has been devoted to cost control, managerial use of cost data, etc., so stated that little difficulty should be experienced in its application to specific problems; while to the latter group it should serve as a ready source of useful information presented in outline rather than verbose narrative form. The discussion of the various points involved is arranged in a logical manner, so that the reader is introduced first to the underlying principles of cost, and thence through gradual development to the culmination in the proper utilization of cost material.

BANK CREDIT, A STUDY OF THE PRINCIPLES AND FACTORS UNDERLYING ADVANCES MADE BY BANKS TO BORROWERS

*By Chester Arthur Phillips. xiv,
374 pp. The Macmillan Co.*

REVIEWED BY JAMES D. MAGEE*

This book will be of interest to bankers, business men, and teachers. It is divided into two parts; the quantitative aspects of

bank credit and the qualitative aspects of bank credit.

The first part treats of the question of the amount of bank credit. The chief problem is the relation of bank loans to

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reserves. Suppose that a bank gets a new deposit of cash—how much can it expand its loans? The traditional theory asserts that the loans may be expanded four, five, ten, or some other factor, times the added cash.

Against this view the author enters a strong protest. He shows, in conclusive fashion, that the individual bank can expand its loans only slightly more than the amount of the new cash deposit. After he has neatly demolished the traditional theory as applied to the individual bank, one is rather surprised to find that he accepts it when applied to the banking system as a whole.

This is his statement:

The relationship between cash and deposits and between cash and loans in an individual bank is very different from the same in the banking system regarded as an aggregate. In the banking system, at any stage of banking development, deposits and loans are a function of cash. An increase of cash in the banking system tends to be followed by a manifold increase in loans, the proceeds of which cause the deposits of the system to swell in approximately the same proportion as the loans. An increase in the cash of an individual bank, on the other hand, does not result in an increase in its loans and deposits equal to several times the amount of the new cash, but in a loan and deposit increase of scarcely more than the amount of the new cash (pp. 82-83).

The reasoning by which he supports the view is not convincing.

The author then proceeds to show how the erroneous doctrine of the relation of cash to loans has caused mistaken conclusions to be drawn in certain cases. Thus, he attacks Professor Moulton's contention that the creation of surplus by a bank weakens the position of the depositor. He also finds that the theory leads to error in discussing the Federal Reserve System.

This system has an important place in determining the amount of bank credit, since it dilutes reserves, doing for the banks what the banks do for the individual. He holds that the Federal Reserve System resulted in inflation which might have been checked by regulating reserve requirements. The old theory would support the position that raising the rediscount rate at the Federal Reserve banks would be inef-

fective in checking expansion, since the banks could loan eight to ten times the amount of the rediscount by using the proceeds as reserve at the Federal Reserve bank. So the bank, under this false theory, could afford to pay 40 or 50% for the rediscount and still make a profit on its loans.

The second part of the book treats of the quality or soundness of bank credit. It is a discussion of the forms the borrower's obligations take and the machinery for testing the credit of borrowers.

The author makes a preliminary survey of the forms of bank loans, of the growth of note brokerage, and of the development of the credit departments of banks. Then he takes up the borrower's statement and makes a detailed study of the various items in the balance sheet and the income account.

This analysis is done from the standpoint of the bank. The clever business man, however, will have no difficulty in seeing how the discussion can help him prepare better statements.

Brief discussions of other sources of credit information, of secured loans, of overdrafts, of loans of country banks, and of loans of banks to banks follow. More space is given to the commercial paper houses and the treatment of this topic is particularly good. Their activities are described and their place in the banking system indicated.

Finally the author considers the relation of bank supervision to bank credit. Here the most interesting part is that devoted to clearing house examinations.

Presumably the banker will be most interested in part one, as part two will present little that is new to him. He will be reassured by the frequent references to proceedings of banker's conventions and to papers which have appeared in banker's magazines.

The business man will be attracted by part two. From it he ought to get suggestions about making credit statements and advice about the utilization of the commercial paper houses.

The scope of the book will make its use as a textbook a problem. The author does not pretend to cover the whole field that a course in banking ordinarily covers.

He suggests the use of other texts to provide introductory or collateral material. It is a question how satisfactory such an arrangement would prove. Teachers will be interested in the Questions, Exercises, and Problems in Appendix A. The questions are mostly of the type to test whether

the text has been read rather than to find out whether the reader has mastered the material and can reason about it. The problems are admirable and test the student's mastery of the principles advanced.

Without doubt, the book will start many discussions concerning banking theory.

THE HUMAN FACTOR IN INDUSTRY

By Lee K. Frankel, Ph. D., Third Vice-President and Alexander Fleisher, Ph. D., Assistant Secretary of the Metropolitan Life Insurance Co., New York, N. Y. With the co-operation of Laura S. Seymour. xix, 366 pp. The Macmillan Company

REVIEWED BY J. KEITH TORBERT*

This volume serves, for the business executive, as a textbook in service and personnel management technique. It is an excellent attempt to awaken a new attitude toward labor administration.

Answering the question, "What is labor administration?" the authors say:

Labor administration is concerned with those activities carried on by employers and employees jointly or separately which benefit both, have as their unit the industrial plant and are not enforced by law or by organized labor.

Three points to be considered in modern industry according to Drs. Fleisher and Frankel are the following:

Community, employer and employee agree that the fundamental purpose of industry is to produce the greatest possible quantity and the best quality of useful commodities with the least possible cost and effort. Each one measures industrial achievement with a different rule. The community wants the lowest legitimate retail commodity price; the employer, higher dividends on the capital investment; and the employee, a larger share of profits in the form of wages. In justifying the expense of labor administration it must be proved not only that it leads to increased production but that the benefits derived are distributed among all three groups.

Unstabilized production and the maladjustment between the requirements of industry and worker are the result of labor

turnover. The constant flow of working force from one factory to another undermines the morals of the working men and lessens general productivity. The cost is borne by employee, employer, and community, and cannot be accurately reduced to dollars and cents.

The causes of this turnover are outlined as follows:

Although as old as industry itself, labor turnover has probably increased rapidly in the past few decades. This is not due to a shortage in labor but rather to the increasing subdivision of labor processes, which has made work more monotonous and transition from one occupation to another more easy. Traveling from place to place has become a simple matter of hours instead of days. The less skilled worker, discontented with his monotonous task, anxious for more wages, more leisure time, or change at all costs, assumes almost a nomadic existence.

Employers promote this migratory condition by competing instead of co-operating in their efforts to secure workers. They go far afield in advertising and scouting for labor and then seldom make it worth while for the worker to remain in their employ by carefully selecting, placing, and training him to fit the job and rewarding his resulting efficiency.

To insure a more stabilized working force in labor the book recommends:

The need for economy, the demands of organized labor, the enactment of labor legislation, and the education of employers have within recent years combined to give a new significance to the problems of labor administration which

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have to do with—obtaining and holding the employees,—technical training, education, and promotion,—methods of remuneration, and of providing savings and loan facilities with insurance against accident, sickness, old age, and death,—the length of the working hours,—the work environment,—medical supervision,—opportunities for recreation and self-development on the factory premises,—and housing and living conditions.

On the first point mentioned—obtaining and holding the employees—Drs. Frankel and Fleisher recommend the following procedure for the employment manager to pursue:

After an adequate choice has been made possible and after analyses have been made of the individual equipment which makes for success in the work to be done, it remains equally important to develop reliable methods for discovering the applicant whose probability of success is highest. Various methods have been suggested and a few have proven their value. Interviews, examinations—mental and physical—investigations of references, studies of personality and previous experience, all play a part in the process of selection.

When the applicant has been chosen the next step is to secure his active co-operation and to fit him into the business organization of which he is to be a part. This necessitates “following up” the new employee to see that he fits his job and that the job fits him.

The authors treat the objections to an employment department in the following way:

While a very small organization may not be able to afford even one person whose sole function is the business of employment, this activity should nevertheless be recognized as a separate and most important function, and in such cases administered by the manager or assistant manager himself.

The second important general heading after hiring and holding the employee is technical training. Under this head come the problems of education and promotion. On this point the authors say:

It is necessary not only to find and train the skillful workman but also to compensate the great number of machine operatives for the monotony of their work. If a man's body is “machinized” for the greater part of the day, his mind must be kept compensatingly alert, so that he may re-

tain an energetic interest in output, be on the qui vive to avoid accidents, react swiftly to emergencies and adapt himself to the constant changes in methods of production. For this reason, training the employee for promotion, and recreational education are assuming almost the importance which has been attached in the past to the learning of a trade. Mental play and vitality are fostered in addition to manual or trade proficiency.

The book quotes statistics and gives examples of some of the leading firms in the country who are co-operating with Y. M. C. A. schools, technical and industrial schools, in educating their employees.

Drs. Frankel and Fleisher emphasize the economy of the shorter working day. In this connection they testify that accidents and sickness are the result of long hours. Health, happiness, and efficiency of employees depend on the working conditions. Under this heading the authors outline accidents, their prevention; sickness, its cure and sanitation, its result.

Treating methods of remuneration the authors defend the bonus system used in plants as rewards for attendance, accident prevention, service, suggestions, and good conduct. On the subject of profit sharing the authors speak as follows:

Profit-sharing is at best only meant for a small proportion of all industrial workers. When individual efficiency is difficult to rate, as with a managing force, in gang work, or in certain industries, such as the gas industry, where the volume of gas produced alone registers the aggregate efficiency of all the various workers, profit-sharing can be a stimulating and effective way of obtaining the worker's co-operation.

The chief difficulty with the pioneer profit-sharing scheme lay, however, in the fact that the percentage of profits shared with the employees, even if stated in advance, could not usually be guaranteed, while its payment was too long deferred to serve as an active stimulus from day to day. Moreover, the employees gained or lost with the fluctuating efficiency of the managerial staff, over which they had no control.

The need for adequate rest rooms and lunchrooms in industrial plants is not overlooked. The work already accomplished by some concerns in building gymnasiums, club houses, and auditoriums for the use of the workers is mentioned somewhat in detail.

A factor in reducing labor turnover is the housing situation. Illuminating statistics are quoted of industrial firms who have solved their problem partially by buying up land and building homes for their workers; the plants to be repaid on an instalment basis.

Insurance, savings, and loans are treated in their various aspects.

The book closes with a brief outline of the organization of the department of labor administration. A well-organized index makes the book more useful for the plant library.

THE WORKERS AT WAR

By Frank Julian Warne, Manager Industrial Relations, United States Housing Corporation. 250 pp. The Century Company

REVIEWED BY ELIZABETH NEWPORT HEPBURN *

At this time there is hardly any other topic of such vital interest to so many people as the subject matter of Mr. Warne's book, "The Workers at War."

The trend of industrial progress is the burning question of this generation. It concerns not merely the working class to which Kipling paid tribute years ago in that curious poem, "The Sons of Martha," but it affects all corporate interests and hardly less that vast public known as "the ultimate consumer."

In his early chapters the author treats of "The World War and Democracy," "The American Workingman," "Industrial Autocracy and the Workers," "The American Workingman at War," "Working for the Government," "The Government as the Employer," and "The Wilson Administration's Labor Policy."

Mr. Warne handles his theme with clarity, simplicity, and the final virtue of restraint. His style is, on the whole excellent, barring an occasional lapse into commonplace as when he uses such a hackneyed and tautological phrase as "the same identical end."

His presentment of the myriad and tremendous problems which confronted the Wilson Administration in 1917 gives one a fresh and even dramatic realization of a situation which three years ago was too close for one to see clearly and without prejudice. His quotations from the President's addresses seem an integral part of

the book. His is no labored defense of the Administration, no exposition of industrial theories with an appended cure-all; rather is his book a statement of related facts which holds the reader's attention, showing a situation so tremendous, so involved and so adequately met, all things considered, that one lays down the volume with a consciousness of corrected perspective and enlarged vision.

"Democracy and the Workingman" is a chapter which must interest the business man, the student of conditions, and the average layman. For instance, the public has had an impression that railroad employees have long been well paid, yet it is shown in this volume that in December 1917, 51 per cent of these workers received \$75 a month or less, and 85 per cent, \$100 a month or less.

The author's aim seems to be to tell the tale of the industrial workers of the United States during the World War, to present certain salient facts regarding capital and labor, yet at the same time to demonstrate that all capital and all corporations are not sinister forces, and that in the final summing up there are three equal sides to the industrial triangle: that of labor, of the employer, and of the consumer.

In Chapter XVI he discusses "the vicious cycle which has come to plague the Wilson Administration and the American people, the predicament in which the Government found itself, following the Armistice, in consequence of the demands for

* Special Reviewer for *Administration*.

higher wages of industrial workers in all lines of activity."

The book is peculiarly free from that emotional tenseness and prejudice prevalent in both the spoken and written word during the past few years.

In handling "Strikes and the Consumer," the author shows the burden which falls upon the great class of citizens who are neither wage workers, in the accepted sense, nor employers—members of the professional classes, employees of the state and city, and salaried workers of many kinds—for the most part incapable of increasing their earnings.

Two interesting chapters are "Industrial Autocracy and the Consumer" and "The Corporation." Mr. Warne tells here the unsavory story of the wrecking of a great railway as a result of financial transactions which seem to belong to the dark ages of our civic history, say to the period of the Tweed Ring, and yet which actually occurred in our own time.

In his chapter on the corporation he touches upon the common evil of stockholders' meetings where a single stockholder, sometimes of another corporation, will dictate the policy of the company's

transactions, while the many individual owners of the stock have in reality nothing whatever to do with the policies which they should control. Mr. Warne says: "Such meetings have the form of democracy but none of its substance."

The final chapter treats of "The Organization of the Consumer," touches on the topic of "mushroom millionaires," springing up as a result of unregulated and autocratic trusts, and of recent war industries, manipulated by men more alive to the opportunity to profiteer than to the duty of patriotism or of just distribution of wealth produced by labor no less than by capital.

Whatever may be the reader's personal opinion on these problems, Mr. Warne's book is full of interesting facts well presented and provocative of thought and discussion. He has no cheap airs of finality, no intent to intrigue the reader by false premises and incomplete evidence.

As an exposition of the present situation in American industry, "The Workers at War" should appeal to the thinking and uncrySTALLIZED mind, whether it be of the employer, the workingman, or the ultimate consumer.

FINANCIAL POLICY OF CORPORATIONS

By Arthur S. Dewing. Five Volumes, 880 pp. The Ronald Press Co.

REVIEWED BY A. M. SAKOLSKI*

The publication in final form of this five-volume treatise by Professor Dewing of Harvard University marks a new era in financial literature. Works of this class that have previously appeared have been largely of the textbook type, treating the subject either in a broad superficial fashion or confining the discussion to a narrow technical field. Dewing's encyclopedic knowledge of the varied structures and the far-reaching activities of business corporations, both past and present, has made it possible for him to give his work a broad

general scope without the sacrifice of thorough detailed analysis. His numerous citations of facts; his frequent references to the best sources of information; and the many extracts of documentary materials scattered throughout the five volumes, furnishes the reader a reference book as well as a textbook on fundamental financial principles.

This kind of combination is exceedingly difficult to accomplish, but Professor Dewing has worked it out successfully by wisely placing his citations of data in footnotes, reserving his text for a discussion of principles. The almost excessive use of foot-

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notes gives the five-volume publication the appearance of a general law digest. One may indeed call it the "Cyc." of corporation finance. Moreover, the convenient separate indexes placed at the end of each volume enhances the "ready reference" character of the publication.

Volume I treats of the financial structure of business corporate. It is entitled "Corporate Securities," but the discussion is not limited to the legal character of stocks and bonds, or to the respective rights and equities of their holders. The author quite skillfully injects here and there certain definitely accepted economic principles underlying the creation and issue of corporate securities. He treats rather briefly of the economic concept of capital and points out clearly the distinction between the terms "capital" and "capitalization." Too much of this sort of thing would weary even the modern college student, to say nothing of the practical man of affairs. As Professor Dewing points out in his preface:

American students are turning, in increasing numbers, to contemporary social and economic courses of study. Those educated in the older humanitarian moulds of thought may regret this change in the students' point of view. Nevertheless, it is present. . . . The alert undergraduate of vigorous, virile personality, the best of foundation for the making of American men, wants to know how banks are organized, how railroads are run, and how the average man one meets in the street is getting a living.

In other words, the student today wishes to know the facts as well as the principles. He can develop economic theories and concepts of his own accord when he has a full knowledge of facts and principles. It is by no means a curious circumstance which leads successful business men in the evening of their lives to discourse learnedly on philosophical economic concepts. David Ricardo, the founder of modern Political Economy, had been a successful English banker and stock exchange trader before writing anything at all on economic topics.

In the chapters on corporate securities, Dr. Dewing is covering a field already well worked over. In some respects, however, he has made notable contributions. The chapter on railroad equipment obligations is the clearest and most complete yet writ-

ten. The description of the Massachusetts "trust" and of other forms of voluntary business association is also clearly set forth so as to be capable of understanding by the ordinary student of finance as well as by the corporation expert. These obsolete forms of corporate organization have more than a mere academic interest. A change of the trend of business legislation may some time result in their revival.

Volume II of Professor Dewing's studies is devoted to "Corporate Promotion." Under this heading he includes the underwriting and marketing of securities. These subjects are highly interesting even to the general reader who perhaps may never have a thought of investing or speculating, and who is in no way concerned with corporation finance. The function of the promoter in business enterprise is recognized in economic theory. He has a legal status, and in Europe (particularly in Great Britain) he is subjected to severe legislative regulations. In the United States corporate promotion has received considerable attention in the periodical press, the popular magazines finding it a favorite theme in either exposing the crookedness of "high finance" or in exhibiting means of obtaining great riches—a "captain of industry" rank.

The popular conception of modern business promotion has beclouded its essential function. Dr. Dewing's work, if widely read, should do much to set the subject in its true light. He takes an impartial attitude in his discussion, pointing out the "selective" as well as the "distributive" function of the investment banker, who, if not actually the promoter, is frequently the agent or essential instrument of the promoter. The mere promoter, as such, has no duties or obligations to the investing public. His object is personal gain. The investment bank or banker, however, has direct relations with the public. The success of any banking business is dependent on public confidence. Accordingly, the banker, when acting as promoter, or promoter's agent, or as the "go-between" between the promoter and the investor, seeks to protect the interests of both. Hence, the "selective function" is of prime importance.

This is pointed out clearly by Professor Dewing. He has good grounds in reiter-

ating the notorious promotion blunders of investment banking houses, but, then, it should not be forgotten that all business is essentially a speculation, and enterprises of the soundest character are likely to "go bad" because of unforeseen changes in economic, financial, or political conditions, or because of miscalculations in forecasting business trends. The present unfavorable situation of many shipping and trading enterprises (created through war conditions) may be cited as examples of sound calculations upset by unforeseen economic changes. Even the wisest statesmen succeed more largely through powers of prophesy than by shrewd calculation. Professor Dewing devotes several pages to the questionable methods of distributing "low-grade" securities, but he neglects to point out adequately the legislative efforts, such as the "Blue Sky Laws" to stamp out the evil. A full discussion of these laws should have had a place in his treatise.

In Volumes III and IV Professor Dewing takes up the internal financial problems of corporations. These are of peculiar concern to investors. Administrative matters are more difficult to present to general readers than the external manifestations of corporate activities such as the creation and distribution of securities. Discussions of modern accounting science, and of corporate interrelationships involve technicalities. Attempts to simplify these frequently leads to defective presentation, and Dr. Dewing has not escaped altogether from this danger notwithstanding his adhesion to the use of technical accounting terms. There is a strong injection of economic principles in the chapters on corporation accounting practices. The ordinary man "of the Street" is likely to wade through these pages without gathering the full significance of their contents. However, the author has done his work well. He cannot be blamed for expressing in scientific terms matters which demand scientific treatment.

The final volume of the work is concerned with corporation receivership and reorganization. There is a great wealth of material for a study of these subjects. Much of it has already been presented by the author in his earlier work on "Corporate Promotions and Reorganizations." The field,

moreover (particularly in the matter of railroad promotion and reorganizations), has been covered to a considerable extent by Cleveland and Powell, by Daggett, Swain, and various other economists and attorneys. The more recent reorganizations of both railroad and industrial corporations have furnished Dr. Dewing with new data with which he has been able to formulate with clearness and distinctness both the causes of business failures and the motives underlying reorganization schemes. Here again, the author's encyclopedic knowledge of financial literature and of corporation affairs has served him to good purpose. There has been hardly a corporate reorganization of any importance within recent years which he does not cite as an illustration of some condition or principle underlying the general problem. Accordingly, he has not only covered the field well, but he has covered it thoroughly.

By way of conclusion the following quotation from the introduction is given to show the clearness of Professor Dewing's style:

The field of corporation finance has been progressively widened, following the changes in the form under which industries are conducted. From 1830 to 1890 railroads and banks were the only great industries requiring the use of large amounts of capital and hence requiring, of necessity, the corporate form of organization. Therefore, the financial terms, methods, and policies connected with the new form became established in railroad finance before they were carried over into other industries. Just prior to the panic in 1893, however, manufacturers conceived the idea of organizing their competitive businesses into large units for which new capital could be secured from public subscribers. Family businesses and partnerships of several generations were changed into corporations, and these in turn merged into great industrial consolidations. And concurrently the financial practices were transformed to agree more nearly with the established practices of railroad finance. It is this entire body of precedents, practices, policies—based on accident, on law, and on past expediency, and applying to all kinds of corporations—which forms the substance of corporation finance.

This work is divided into five volumes. The first deals with the form of securities likely to be issued by a corporation. The second traces the embryonic development of a corporate enterprise through the period of organization, or promotion. A third discusses various problems

arising from the financial administration. A fourth section describes the methods which may be pursued in obtaining the money necessary to expand a corporation and the forms which this expansion may take. And the fifth and last sec-

tion is concerned with the failures of business enterprises and the various means to be employed to rehabilitate a bankrupt corporation. The volumes are interrelated; no single phase of corporation finance is complete in itself.

MARKETING—ITS PROBLEMS AND METHODS

*By C. S. Duncan. xiv, 500
pp. D. Appleton & Co.*

REVIEWED BY GEORGE BURTON HOTCHKISS*

Dr. Duncan, formerly Assistant Professor of Commercial Organization at the University of Chicago, has given us a valuable, and in many respects, a brilliant book. In it he has made an ambitious attempt to cover the whole field of marketing, both of raw materials and of manufactured products. Such a book has been extensively demanded by university classes and by business men. Most of the existing works—and the list is painfully brief—have been somewhat specialized, and a more comprehensive treatise is needed. Even if Duncan's book were less satisfactory than it is, it would be welcome.

It is not altogether satisfactory. Its faults are of the kind we least expected from the author of "Commercial Research," namely those of inaccuracy. Possibly the inaccuracies are due to haste in preparing the book for a waiting market.

This criticism does not apply to Part II of the book dealing with manufactured products. Here the author seems to be on familiar ground. He gives us a wealth of concrete material and it is admirably organized and proportioned.

Part I, dealing with raw materials, leaves much to be desired. Something has apparently been sacrificed to the desire to organize the material into a form parallel to that of Part II. The treatment of some subjects is so sketchy and inaccurate that it is practically certain to mislead any reader who has not already a fairly good knowledge of the subject. This is particu-

larly true of the discussion of the organized exchanges. It is also to be noted in the unhappy choice of the illustrative examples for many definitions and statements of principles. The author, for example, in distinguishing between a staple and a novelty, mentions ordinary apples as staples, and as examples of novelties specimens of large fine apples wrapped in tissue paper or a "hot-house" variety. He says, "milk of good quality may be delivered at the back door every morning in the year. But one may also buy at probably twice the price a 'certified' quality. The former is a staple; the latter is a novelty."

Such statements, taken literally, would certainly mislead. Again, in speaking of marketing farm products by parcel post, he mentions as typical examples eggs and potatoes. He says the great staple food crops are the most speculative commodities that enter the market, from which it might fairly be inferred that the author considers grain more speculative than cotton or cantaloupes.

The examples might be multiplied to show how the author has carelessly committed himself to statements that cannot be accepted at their face value. The fault may be due partly to the author's desire to be interesting. If this was his purpose he has certainly succeeded.

The style is vivid and breezy. At times it goes a little too far and becomes flamboyant. In general, however, it is kept within bounds, and any business man is sure to find it delightfully easy reading. Such mistakes as have been mentioned are only blemishes

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and are not sufficiently serious to detract materially from the value of the book.

It seems a little unfortunate that the author has not given more consideration to some developments in the marketing field that are particularly timely, such as co-

operative marketing. His discussion of governmental regulation seems also to be inadequate. So much has been given us, however, that it is perhaps a little ungenerous to complain because the author did not give us more.

INDUSTRIAL ADMINISTRATION

A Series of Lectures. By A. E. Berriman, St. George Heath, Leonard Hill, T. B. Johnston, A. F. Stanley Kent, T. M. Legge, T. H. Pear, and B. Seeborn Rowntree. 203 pp. The University of Manchester Press. American Agents, Longmans, Green & Co.

REVIEWED BY JAMES W. FARRELL*

The present book, published by the University of Manchester, consists of a series of eight lectures delivered in the Department of Industrial Administration in the College of Technology, Manchester.

B. Seeborn Rowntree in his lecture on "Social Obligations of Industry to Labor" starts with the principle that industrial enterprise is only justified if it can answer a threefold test.

- (1) It must produce something of service to the community.
- (2) It must produce it under good conditions.
- (3) It must sell at a reasonable price.

Taking up the relations between employer and employed he defines the duties which the employer owes the workers in return for their co-operation in the industrial enterprise in which they are both jointly engaged. He considers these duties under two headings:

First, we owe it to them that the material conditions under which they work shall be satisfactory. Of these conditions the most important is the weekly wage. Are we paying to all our workers wages that will enable them to live in health and comfort, with some opportunities for self-realisation? This question is so important that I make no apology for discussing it in some detail. I deal only with the minimum wages, and submit that these should be determined by the human needs of the workers, wages above the

minimum being fixed by the haggling of the market.

Dealing first with the wages of the men, which, since 90 per cent of them marry, must be based on the needs of married men, I think that the minimum standard, below which they should never be allowed to fall, may be thus stated: A man's wage should enable him to marry, to occupy a decent house, and to bring up a family of normal size in a state of physical efficiency, while allowing a reasonable margin for contingencies and recreation.

He then considers what sum will enable a man to maintain a family of five in accordance with the standard just outlined, taking up in detail the chief items of necessary expenditure, such as food, rent, clothing, coal, household and personal sundries, the total coming to a weekly wage of 35s. 3d. For women wage earners, he calculates the weekly wage at 20s., or £1.

The above estimate is framed in the same cautious spirit as my estimate for men's minimum wages, and I do not think that a lower figure could possibly be defended. Yet before the war, it is doubtful whether one in ten of the four million women workers was earning £1 a week. Wages of 8s. and 9s., and even lower, were common in many parts of the country, and many hundreds of thousands, possibly millions of women, were working for less than 15s.

But it must be remembered that up to now we have spoken in terms of prices as they ruled in 1914. If we were to take present prices, our minimum wages would have to be far higher. Prices

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today are, of course, abnormal, but, on the other hand, they are not at all likely to return to their 1914 level. No one can precisely foretell the post-war normal cost of living, but even if it drops to 25 per cent above the level of 1914, then the minimum wages must be 44s. for men and 25s. for women. If it fails to drop so low, then the minimum wage must be correspondingly increased, but it would be very optimistic to assume that it may drop lower.

Answering the question, "Can industry afford to pay the minimum wages indicated?" the author makes the following observations:

Obviously it would not be in the interests of workers, by statute or otherwise, to fix a minimum wage at so high a level as to cripple industry. Increased wages may come from four sources. They may come from the consumers, from whom we may ask increased prices for the goods supplied to them. But this method can only be employed to any extent in the case of goods which are not consumed by wage-earners because our minimum wage will rise and fall with the cost of living, and any attempt to meet the added charge on industry by raising prices indiscriminately will only involve a proportionate increase in the wage.

Secondly, increased wages to some extent may come directly from the workers, since their efficiency may increase with their earnings. It is poor economy to pay them so low a wage that they cannot afford the necessities of a healthy life. There is not the least doubt that large numbers of our labouring people have in the past been inefficient simply because of their low wages. Neither their bodies nor their brains have been adequately nourished. Again, workers who are chronically labouring under a sense of injustice, and who feel that they are being paid what they call "starvation wages," will never do their best. Still, making allowance for these facts, I do not think that we can expect a large proportion of the increase in wages to come from this source.

The third possible source of an increase is the profits of employers and shareholders. Something may doubtless be done by way of reducing them, and in so far as this is possible without imperilling an industry I do not think the prospect need alarm us. But although I cannot support the statement with any volume of statistical evidence, I do not believe for a moment that there is in the average industry any vast reservoir of profits in excess of those necessary to maintain it in a healthy condition, into which workers may dip for higher wages.

I believe that the fourth, and the principal, source to which we must look for increased

wages is increased efficiency in the organisation and administration of industrial enterprises. The outlook here is almost unlimited, and one of the principal social obligations of the employing class is to conduct industry so efficiently that the payment of high wages is possible.

Passing from the subject of wages to other social obligations of industry, the author deals as follows with the hours of work:

I believe that in most industries the working day is at present unnecessarily long, and could be reduced without any material reduction in output. We ought to aim at a working week of not more than 48 hours. I do not, of course, pretend to dictate to employers in every industry, and to tell them that they can actually reduce their hours to 48 without reducing output. But I am confident that it can be done to a far greater extent than is generally supposed, and that long hours are often the result, not of necessity, but of custom.

Short hours may effect economies for three reasons. (1) Long hours usually involve starting at six o'clock, and working two hours before breakfast. Work done before breakfast is notoriously unsatisfactory. (2) By shortening the working day, there need only be one break for meals instead of two. Employers know very well that more time is lost in such a break than is actually allowed for the meal. There is a wonderful leakage of minutes between leaving off and beginning again! (3) A man can work more strenuously and do more per hour when working a short day than when working a long day. I know that in many industries the output is largely regulated by the speed at which the machinery works. But even here it will often be found on close examination that a keen and alert worker, one who wastes no time in starting and stopping, or in putting work in and taking it out again, can get as much out of a machine in 48 hours as a less vigorous worker will do in 53.

The third obligation of industry to the workers is greatly to lessen, if not to remove entirely, the evil of unemployment.

This problem should be attacked from two standpoints. First, we should seek to reduce the total amount of unemployment, and, second, to reduce the hardships caused by such unemployment as cannot be prevented. It is of vast importance, not only to the workers, but to the whole of industry that we should achieve these ends. When peace is declared we shall have to face a serious economic situation, and it is urgently necessary to create new wealth as rapidly

as possible, to make good the enormous loss we have sustained through the war.

This will mean, among other things, that we must introduce labour-saving machinery, and more capable administration, and also persuade the worker not to limit output. But we can hardly expect him to sympathise with our efforts so long as they may expose him to the risk of immediate suffering through unemployment. Although we know that in the long run greater individual efficiency does not increase, but tends to reduce, the amount of unemployment, its immediate effect may be to throw individuals out of work. We must remove the dread of this contingency before we can enlist the hearty co-operation of the workers.

The fourth obligation of the employer to labor, on the material side, is that more attention should be paid to the working environment.

In planning a factory we should always bear in mind, not only its suitability for the mechanical processes to be carried on, but the comfort and health of the men and women who are to work in it. The worker will not be the only one to benefit by such consideration on our part. Anything which promotes his health and comfort tends to make him more efficient. I emphasise this point, not because "I am out for big dividends," but because I do not wish to see improvements which are desirable, in whatever aspect we regard them, idly dismissed as "impracticable."

Finally, the author takes up the obligation "to create in the factory a tone and atmosphere which will encourage every worker to be and to do his best."

The second lecture, by T. H. Pear, deals with "The Applications of Psychology to Industry." Considering the different aspects from which work may be regarded he sets down the following list:

1. Initial capacity of the individual worker before training:
 - (a) physical,
 - (b) mental.
2. Method of work:
 - (a) involving improvement of tools, machinery, etc.,
 - (b) involving modification of the physical and mental processes employed by the worker.
3. The "will to work."
4. Energy expended.
5. Output:
 - (a) quality,
 - (b) quantity.
6. Wages:

- (a) amount,
- (b) conditions determining their payment.

7. Periods of work:

- (a) total length,
- (b) the manner of their distribution.

If we consider the relationship between 1 and 2 in the above table, we may either:

- (a) attempt to select the workers who are initially well fitted for the tasks they are about to undertake, subsequently training such selected workers along scientific lines, in order to teach them the best method of work before, and not after, they have learnt other less efficient methods; or
- (b) assuming that the worker is fitted for his present task, we may strive to improve the conditions under which he works, his tools, machinery, and especially his method of working.

Discussing possibility (a), he takes up the selection of workers fitted naturally or by education, for special tasks as follows:

Every one agrees that a person, in order to become a successful singer, must initially possess an "ear for music," or to succeed as the driver of a locomotive, must be able to discriminate between colours. In the latter case, indeed, selective tests have been in use for many years. But the fact is not so generally grasped that such capacities as quick and retentive memory, good muscular control and co-ordination, quickness of judgment, also fit people for special tasks in everyday life. Moreover, such capacities can nowadays be tested and subsequently trained. The great care and thought which is often given to the selection of an athlete for a competition, and to the careful training which he subsequently receives, is seldom equalled when the question is not one of play, but of work.

Now, in what ways would the psychological selection of workers offer advantages over the present system or usage? We may understand this more easily by considering briefly two ways at present in vogue for choosing workers. The first depends upon the general impression made by the candidate upon the representative of the employers. Such a representative is spoken of by others, and in time, perhaps, comes to describe himself, as a "judge of men."

A. E. Berriman begins his lecture on "Education as a Function of Management," on the basis that industrial education should possess these three qualities:

1. Humanistic, to secure general happiness.
2. Technical, to secure collective efficiency.
3. Evolutionary, to secure individual development.

Being a discussion of the subject with special reference to the English apprentice system, this particular lecture will have a great appeal for American readers.

The same may be said of the lecture on "Training for Factory Administration," wherein the lecturer, St. George Heath, draws a lengthy comparison between the management of a modern factory and the administration of the English Civil Service.

Dr. T. M. Legge, Medical Inspector of Factories, in his lecture on "Occupational Diseases" takes up in detail such matters as poisons and the injurious effect set up by dust and gives the following statistics:

Now look at these figures of lead-poisoning. Why is there the contrast between the figures for white lead works, china and earthenware manufacture, paints and colours, showing such a remarkable drop, and those for smelting, coach and ship painting, which have shown little or no improvement over a number of years. Like the honest surgeon I wish to publish the failures as well as the successes, as from the failures perhaps most is learnt.

LEAD-POISONING

	Year		
	1913	1904	1900
White lead	29	105	358
Pottery	62	96	200
Paints and colours	22	43	56
Coach-painting	71	60	70
Ship-painting	31	48	32
Lead-smelting	49	41	50

The chief cause, in my opinion, is a simple one, namely, that in the former, locally applied exhaust ventilation to remove dust and fumes at the point of origin can be effectively carried out, and in the others it cannot. On the practical side, there is little more to be learnt about lead-poisoning, and you can take it as axiomatic that all lead-poisoning arises from inhalation of dust and fume. This removed or prevented, there will be no lead-poisoning.

He next turns to poisons which act directly by absorption through the skin, the best examples of which are to be found in the intermediate substances obtained from coal tar and used in the manufacture of explosives and dyes, such as anilin oil and T.N.T. In both cases "the right measures of prevention were proved to be cleanliness of work, cleanliness in every meaning of the word, prevention of dust and of contamina-

tion of any part of the skin by the substance."

The lecturer then deals with eye-strain among those who work without sufficient natural light, such as miners and other underground workers, and those whose eyes suffer from excessive light, such as glass-bottle finishers, who are obliged to stare into a furnace at a temperature of 2,000° C. for hours daily and who pay for it by a peculiar form of cataract. In this section is also treated the matter of industrial deafness from loud noises, prevalent among boilermakers. The final paragraphs take up the problem of anthrax and show with what success the disease has been combated in England—in the way of prevention by means of disinfecting wool and in the way of cure by the injection of anti-anthrax serum.

The fifth lecture by Leonard Hill deals with "Atmospheric Conditions and Efficiency" and contains much interesting matter. The lecturer finds that close air produces its harmful effects in two ways:

- (1) Through its physical qualities, its lack of adequate cooling and evaporative powers acting upon the skin and the respiratory membrane.
- (2) Through the spread of infection from carriers of the germs of disease.

Cool surroundings, he tells us, are of the utmost importance to stimulate men to work and in support of his statement cites the following:

The New York Commission on Ventilation conducted tests of optional work, for the doing of which a small cash bonus was given. They found 63 per cent more typewriting done at 68° than at 75° F., and of heavy physical work 15 per cent more at 68° than at 75°, and 37 per cent more than at 86° F.

Of 215 records of temperatures in workrooms in New York, 73 per cent were over 73° F. and 29 per cent over 80° F. The loss of efficiency from over-heating appears, then, to be enormous.

In "Industrial Councils and Their Possibilities" T. B. Johnston gives the outline and constitution of a National Council for the Pottery Industry, which may be modified and extended to other industries. The general plan for industrial reconstruction he sets forth as follows:

- (1) Our industries should be reorganised on a national basis. The unit in this national organ-

isation must be the trade as a whole, not the separate business. The separate employers in each trade should be associated in local Federations of Employers. The operatives in each trade should be associated in the Trade Unions.

(2) Control, in each trade, should be exercised through Joint Committees, especially representative of employers and employed.

(3) The local organisations should in turn be linked to a national organisation of the trade, constituted on similar lines. The several trades organisations should be co-ordinated in a Minister of the Crown responsible for the industrial life of the country as a whole.

(4) Decisions regulating prices, wages, hours and conditions, for the trade as a whole, would, through such an organisation, be arrived at by voluntary agreement between persons actually engaged in the industrial affairs of the nation.

(5) When it could be shown that a certain proportion, say, employers employing 75 per cent of the work people and 75 per cent of the operatives, through their representatives, were parties to any such agreement, power should be conferred upon the parties to apply to Government for an Order making its provisions obligatory on all engaged in the trade in question, whether

members of the Employers' Federation or Operatives' Societies or not.

(6) A scheme of national industrial reconstruction on these lines is regarded as practicable and urgent.

The benefits of the system outlined by Mr. Johnston he lists as these:

(1) The best wages an industry could carry would be ensured to the workers.

(2) Economic security and a reasonable return would be afforded to the average manufacturer.

(3) Distributors, both wholesale and retail would get a reasonable reward for their services.

(4) The consumer would eventually pay the price he ought to pay, neither less nor more.

(5) Initiative and enterprise would not be interfered with in the least, rather would they be encouraged.

The concluding lecture of the book is by A. F. Stanley Kent, Director of the Department of Industrial Administration in the College of Technology, Manchester, who handles the subject of industrial fatigue—its nature, causes, results, and prevention.

REVIEWS OF BUSINESS PAMPHLETS

Industrial Accounting as an Aid to Management. By Homer N. Sweet, C. P. A. National Association of Cost Accountants, Woolworth Building, New York, N. Y.

Every industrial accountant will want to slip this pamphlet into his pocket to take home for detailed study. The author is a member of the firm of Lybrand, Ross Bros. and Montgomery.

Industrial accounting should be tested for its utility as an aid to management. To be of practical worth, it must be a dependable guide to the executives in the administration of manufacturing operations. On this point Mr. Sweet says:

The failure of many small plants to expand their business has been due to the fact that the executives have not learned to avail themselves of records as a means of control and direction of production. The scope of their administrative capacity accordingly has been restricted. They have not appreciated the possibilities for production on a larger scale and for reductions in cost which await the development of an adequate scheme of industrial accounting. Failing to perceive these possibilities or the means of realizing them, they allow the department of accounts to remain a mere annex to the factory instead of making it an essential and vital part of the organization.

How industrial accounting may be utilized is outlined as follows:

The writer is not referring to the general accounts of a corporation which are reflected in the profit and loss statement. Such accounts are of great value, of course, for they show the profits which have been earned over a period as the result of the combined activities of financing, purchasing, manufacturing, and selling. Such statements should be available for the executives, directors and stockholders.

This, however, is not the function of industrial accounting. The task of the manager in charge of manufacturing is, in a word, to produce goods in sufficient quantity and at low cost. He is constantly aiming to effect reductions in cost. It may be said almost that he has to shape the profit and loss statement before the record thereof can be written on the books. He knows in advance of production, as a rule, what the selling prices are and his problem is to so organize production that the goods can be turned out at a cost commensurate with the known selling

prices. In directing production on a large scale, he needs reports which will disclose whether the output of the factory is measuring up to the standard which he has planned, whether labor costs for the factory as a whole are being kept within the bounds which will allow a fair profit, whether materials are being utilized without excessive waste and whether the overhead expenses of the producing and non-producing departments are being confined within the predetermined limits of a budget. These objects are accomplished through industrial accounting.

In the opinion of Mr. Sweet, the requisites of an effective system of industrial accounting may be summed up as follows:

First: It should furnish comprehensive information, which covers the entire field of manufacturing operations of the business and includes all the factors which the manager in charge of manufacturing should watch and control.

Second: It should furnish information in condensed form, for executives have little time for consideration of details and hence must focus their attention upon significant figures which exhibit results in perspective.

Third: It should supply information promptly, for otherwise opportunity for correction of inefficiencies in operation may be lost or postponed too long.

The ordinary profit and loss statement does not fulfill these requirements. It is not expressed in terms which alone would enable a factory manager to discover inefficiencies. The task of the manager in charge of manufacturing, as has been stated, is to keep the items of manufacturing cost within limits which will result in a profit. He must control operations and introduce economies and corrective measures with a mind to their effect upon the profits on orders yet to be processed. A profit and loss statement is merely a proof of what his efforts have accomplished with respect to orders already completed. It does not disclose the facts which would permit him to minimize the costs of future operations.

To illustrate a typical unit of measurement, Mr. Sweet uses the rubber tire as follows:

In the rubber tire industry, for example, the number of tires produced is not the common unit, as might be supposed at first thought. There are too many sizes and types of tires to permit of reliable deductions being drawn from statistics based on the total number. The

proportion produced of each size, moreover, varies from week to week so that the "average" size is not a constant. The common unit has to be derived by taking a given size of a particular type of tire as the basis, and converting the number produced of all other sizes and types into an equivalent number of "base" tires. The conversion is done by means of differentials which are calculated from the standard labor hours required to complete each tire.

Especially valuable to the industrial accountant is the following list of vital factors which should be reported to the manager in charge of manufacturing:

1. Direct hours. (The total actual hours should, wherever possible, be related to total standard hours, for the percentage of variation is an indicative factor.)
2. Indirect hours.
3. Number of workers per normal week.
4. Number of workers (a) hired, (b) discharged, and (c) resigned.
5. Average labor cost per direct hour.
6. Assumed direct-labor hours required to produce sales orders accepted.
7. Assumed average labor cost per direct hour required to produce sales orders accepted.
8. Idle machine hours due to (a) repairs, and (b) other causes.
9. Production orders awaiting receipt of raw materials.
10. Cost of raw materials contracted for and not delivered.
11. Assembly orders awaiting component parts.
12. Worked material rejected on account of defective workmanship.
13. Overhead expenses as predetermined by budget.
14. Overhead expenses incurred.
15. Overhead rate per direct hour as predetermined by budget.
16. Actual overhead rate per direct hour.

The suggestion is made that many of these factors be divided by the common unit of output to give figures that will be more readily comparable.

Mr. Sweet realizes perfectly that application of all of these sixteen factors in every plant is not possible because of a difference in operating methods and in size of organization. Nevertheless he maintains that:

They do illustrate, however, variable elements which are subject to regulation and control when once brought to the attention of the manager. By giving heed to the fluctuations in such factors from week to week, he can detect the most

urgent needs for improvement. The effect of his corrective measures can be most far-reaching because these factors enable him to visualize the multifarious operations of the entire plant.

Frenzied Figures. Compiled by Frederick W. Davis, A. A. 19 pp. Burroughs Print Shop, Detroit, Mich.

No pamphlet reviewed in this department can be more helpful to a business man than this brochure. Doubtless, some of these reviews show the use of operating statements and records for the office manager. Other reviews possibly present a description of effective methods for executive control. Still other reviews may describe solutions to the problems arising out of the conflict between capital and labor.

Such reviews are merely shop talk. They may aid in the solution of administrative problems in the executive office or in the industrial plant. They give no help in the solution of the more annoying problems which the business man faces on his arrival home.

"Frenzied Figures" will not do as a textbook to supplement the lessons of the children but it does contain some interesting problems which the children may use to confuse the teacher.

If a business man will take home from the book one of these problems this evening, he will be welcomed with open arms—by his children.

To them this collection of puzzles, old and new, will be a source of delight so long as it lasts.

A few typical problems may be quoted by way of illustration.

One in subtraction:

Subtract 45 from 45 and leave 45 as a remainder.

Answer:

$$\begin{array}{r} 9+8+7+6+5+4+3+2+1=45 \\ 1+2+3+4+5+6+7+8+9=45 \\ \hline 8+6+4+1+9+7+5+3+2=45 \end{array}$$

One in algebra: A bottle and a cork cost \$1.10. The bottle cost \$1.00 more than the cork. What did each cost?

Answer:

\$1.05 and .05

One in present values:

A man sold a horse for \$90, bought him

back for \$80, and resold him for \$100. What did he make on the transactions?

Answer:

\$20; had \$90 at first, \$110 at last.

One for the "kiddies":

Six ears of corn are in a hollow stump. How long will it take a squirrel to carry them all out, if he takes out three ears a day?

Answer:

The "catch" in this problem is in the word "ears." He carries out two ears on his head (his own) and one ear of corn each day; hence it will take him six days.

One for the lady of the house:

If three cats can catch three rats in three minutes, how many cats can catch one hundred rats in one hundred minutes?

Answer:

The same three cats.

One for the lawyer:

An old farmer left a will whereby he bequeathed his horses to his three sons, John, James and William, in the following proportions: John, the eldest was to have one-half, James to have one-third, and William one-ninth. When he died, however, it was found that the number of horses in his stable was seventeen, a number which is divisible neither by two, by three, nor by nine. In their perplexity the three brothers consulted a clever lawyer, who hit on a scheme whereby the intentions of the testator were carried out to the satisfaction of all parties. How was it managed?

Answer:

The lawyer had a horse of his own which he drove into the stable with the rest. "Now," he said to John, "take your half." John took nine horses accordingly. James and William were then invited to take their shares, which they did, receiving six and two horses respectively. This division exactly disposed of the seventeen horses of the testator, and the lawyer, pocketing his fee, drove his own steed home again.

Note: The above solution rests on the fact that the sum of the three fractions, named, $\frac{1}{2}$, $\frac{1}{3}$ and $\frac{1}{9}$ when reduced to a common denominator, will be found not to amount to unity, but only to $\frac{1}{18}$. The

addition of another horse ($\frac{1}{18}$) bringing the total number up to eighteen, renders it divisible by such common denominator, and enables each to get his proper share, the lawyer, then resuming his own $\frac{1}{18}$, which he had lent for the purpose of the division.

It is not generally known, but in the administration of the Mohammedan Law of Inheritance, which often involves numerous and complicated fractions, this expedient is frequently employed.

An easy one:

How may 100 be expressed with four nines?

Answer:

99 9/9

One in rural economics:

A father sent his three daughters to the market to sell apples. The eldest had 50, the second daughter 30, and the youngest 10. The farmer jokingly told them all to sell at the same price, and bring home the same amount of money. How did they manage it?

Answer:

They began selling at the rate of seven for two cents, the first selling 14 cents worth, the second eight, and the youngest two cents worth. But they had saved the choicest of the fruit, the first having one apple left, the second two, and the youngest three. Meeting a liberal customer, they sold these at six cents each, and the respective amounts received by them were therefore as follows:

The first,	$14¢ + 6¢ = 20¢$
The second,	$8¢ + 12¢ = 20¢$
The third,	$2¢ + 18¢ = 20¢$

One for the accountant:

Suppose you were offered a job and were promised one cent for the first day's work, double that or two cents for the second day, four for the third, and so on for every day in the month. Would you take the job?

Answer:

Here is what doubling wages every day amounts to in a month, starting with a cent the first day:

1	1
2	2
3	4
4	8

5	.16
6	.32
7	.64
8	1.28
9	2.56
10	5.12
11	10.24
12	20.48
13	40.96
14	81.92
15	163.84
16	327.68
17	655.36
18	1,310.72
19	2,621.44
20	5,242.88
21	10,485.76
22	20,971.52
23	41,943.04
24	83,886.08
25	167,772.16
26	335,544.32
27	671,088.64
28	1,342,177.28
29	2,684,354.56
30	5,368,709.12
31	10,737,418.24

\$21,474,836.47

The Fallacy of "The Stabilized Dollar."

By B. M. Anderson, Jr., Ph. D., Chase National Bank, New York, N. Y.

Every reader who enjoyed Professor Kemmerer's discussion of "The Depreciated Dollar" last month should send for "The Stabilized Dollar," as analyzed by Dr. Anderson, *Economist of the Chase National Bank, New York City.*

In perusing this pamphlet, the reader should not confuse Professor Irving Fisher of Yale University with Professor Willard Fisher of New York University. Both of these professors have written extensively about the dollar which fluctuates.

It is Professor Irving Fisher's plan which Dr. Anderson outlines as follows:

When prices are moving upward the weight of the gold dollar is to be increased to pull them down; and when prices are moving downward the weight of the gold dollar is to be diminished in order to raise them again.

To avoid the inconvenience of continually calling in and reminting gold coins, gold coins

are to be withdrawn entirely from circulation. The circulating medium is to be gold certificates redeemable in a varying weight of gold bullion, the weight depending on the movements of commodity prices.

The exact amount of change to be made in the weight of the bullion is to be governed by an "index number" of commodity prices. An index number is based on an average of the prices of a large number of commodities, say two or three hundred. The actual average of these prices in a base year, say 1910, is counted as 100 per cent, and the averages of the prices of the same commodities at other times would be figured as percentages of the 1910 prices. If the index number rose or fell by a given percentage, the bullion content of the dollar would be increased or lowered by the same percentage.

Professor Fisher would limit the change in the bullion paid out to one per cent a month, so that if price changes were greater than that in any given month they would not be fully compensated for. He would expect, however, that a change of one per cent a month in the weight of the dollar would ultimately catch up with any price changes.

Gold certificates would be issued by the Government in the same way. A given amount of gold bullion would purchase from the Government a smaller or larger number of paper dollars, depending on the index number. By this plan Professor Fisher proposes to keep the dollar in fixed relation to the "market-basket."

The true meaning of stability, as Dr. Anderson sees it, is shown in the following quotation:

We should purchase dearly a theoretical stability in the relation of the dollar to the "market-basket," if we introduce a new element of instability into the finances of the Government, and the gold basis of the currency itself. Apart, even, from such violent price changes as the war has brought about, the plan would involve new elements of danger in any critical situation.

Let us suppose, for example, that the plan had been in operation in the United States in the critical days of 1893 and 1894, when President Cleveland, with an inadequate gold reserve, was struggling manfully to preserve the gold standard in the face of a foreign drain upon our gold. It was in the midst of a financial and industrial crisis and depression, and commodity prices were breaking rapidly. American bankers who had foreign obligations to meet in gold, as well as speculators in gold, foreseeing that the Government would progressively lighten the gold dollar by one per cent a month as prices continued to fall, would have rushed to redeem their dollars in gold in advance of their need for gold for

export in order to avoid the steady loss of one per cent a month which the index number was requiring. Even had patriotic American bankers been willing to submit to the loss of one per cent a month, their European correspondents would have forced their hands. European balances in American banks would have been withdrawn. "Dollars" would have been sold short by European exchange speculators, who would have seen that dollars would grow one per cent lighter every month. London, instead of helping us as she did, would have felt forced to turn against us. The pressure would have been irresistible. This would have led on the one hand to a complete exhaustion of the Government's gold reserve, and the abandonment of the gold standard, and on the other hand, to a sharp contraction of the currency, the former intensifying the financial distrust and chaos, and the latter increasing the difficulty of doing even such business as remained to be done.

Especially appropriate at this time of business unrest is the following explanation of business cycles:

The business cycle is looked upon by some writers, among them Professor Fisher, as an unmitigated evil. Professor Fisher seems to regard the business cycle as primarily caused by changes in the general average of prices. He regards it as one of the merits of his plan that it would eliminate business cycles and keep business always on an even, steady keel, through keeping the general average of prices fixed.

Space does not permit a full discussion of the business cycle. It may be said here, however, that those students who have made the most careful study of the business cycle do not see its causes in the changes in the *general price-level*. Rather, in so far as price changes are causes of the ups and downs of business, it is changes in the *relations among particular prices*, and especially in the relation between the prices of finished goods on the one hand, and costs of production on the other, wages, rents, interest, prices of raw materials, and the like. It is this relation which governs business *profits*. Reactions in business, periods of liquidation and readjustment, if not too violent and prolonged, are wholesome rather than harmful. They prevent unsound business policies from being carried too far.

Ups and downs of prices through the business cycle are wholesome rather than harmful, if not too violent. Falling prices tend to bring depression to a close by encouraging a revival of demand. Rising prices tend to bring a boom to a close before it goes too far, by lessening consumption and checking demand.

The movement of prices through the business cycle may be likened to the governor on an

engine, constituting certain natural limits, and tending to steady the course of business. Business cycles need mitigation. The mitigation should come, however, not through tampering with price movements, but through a variety of indirect measures affecting the course of industry itself, particularly measures designed to take up slack in time of depression and to relieve the strain on industrial capacity in time of boom, and measures designed to secure greater foresight in business plans.

Periodical literature has been filled with discussions how widows and orphans, men on fixed salaries, public utilities, and other recipients of fixed incomes have suffered on account of the war.

On this point Dr. Anderson says:

If the present gold standard is left alone, the future promises real relief to these sufferers from war-time prices. If, however, we stabilize the dollar at the present level (or, as Professor Fisher has recently proposed, at 10 per cent below it), we should perpetuate forever the losses which the war has brought to these elements of our population.

In pointing out how impossible it is for a *single* country to attempt to adopt Professor Fisher's plan, Dr. Anderson adds:

Certain critics, as Professor Kemmerer, have emphasized, for example, the disturbances in the international exchanges which would be involved as between countries on the old-fashioned gold standard and the country with the new plan in operation.

This criticism loses much of its point in a period of such derangement in the international exchanges as exists today. But when the long pull is considered—and it is as a long-run reform we must consider the measure—this criticism has very great significance. Foreign business is a very important part of our total business. The ratio of foreign to domestic trade has ranged from a minimum of ten per cent to a maximum of anyhow 25 per cent in the last thirty years. From 1890 to 1913 the range was from 10 per cent to over 23 per cent. It would be a backward rather than a forward step to introduce a new element of uncertainty into so much of our business.

More important would be the danger in critical times like the Crisis of 1893 and that of 1907 referred to above, of foreign drains on the gold of the country operating under Professor Fisher's plan, from countries which had not adopted the plan.

This review has already quoted very

extensively from the pamphlet but it would not be complete without giving Dr. Anderson's views about social discontent:

It is impossible that a country should carry on a great and wasteful war and at the same time keep up the pre-war level of comfort and well-being among its people on the average. If we could keep the level of prices fixed during a war we should merely shift the burden of the suffering. Under the present system, the active business man especially engaged in war industries may find his profits rising even faster than his cost of living. The laborer in war industries may find his wages rising even faster than the cost of living. The retired capitalist, the beneficiaries of trust funds, men on fixed salaries, and the like, suffer. If Professor Fisher's plan could prevent a rise in war-time prices, the relations among these elements of the population would be changed. The retired capitalist and bondholder would not suffer. They would be able to purchase goods in accustomed quantities. The reduced consumption would thus be forced on other elements of the population, including the laborers. This would intensify rather than lessen social discontent and social radicalism. If the dividend in the form of current stocks of goods is greatly reduced, and the divisor in the form of the general consuming public is not reduced, it is a simple problem in mathematics. If some elements of the population continue to consume at an undiminished rate, then other elements of the population must consume at a greatly diminished rate. No legerdemain of manipulation of the currency can avert this elementary fact.

Some Evidence on House Organs. By Burt MacBride. William Feather. Cleveland, Ohio.

Answers received from 313 firms to questionnaires on the circulation, cost, and effectiveness of their house organs form the base of this booklet. It deals with what is coming to be called the "external" house organ as opposed to the "internal" or employees' magazine. On effectiveness the consensus of opinion, according to Mr. MacBride, was as follows:

A house organ is of unquestionable benefit, and is an advertising expense that entirely justifies its cost. Firms . . . including scores of manufacturers doing a wide national advertising in all mediums, are—almost without exception—very enthusiastic about its aid in their growth and welfare. Not a few concerns attribute their success chiefly to their house organs. Many

say it is the best (most profitable) advertising they do. Some use it as their sole medium.

The biggest house organ in the country was discovered to be that of the Prudential Insurance Company, with a circulation of 2,500,000. Nine organs exceeded 100,000 circulation, including *The Buick Bulletin*, 400,000; *Remington Notes*, 250,000; *The Doctor*, 150,000. Excluding these "top-notchers," the average circulation was 14,900—with a low figure of about 500. The effectiveness of the house organ does not seem to be determined by size.

Costs in this as every other line were rising when the investigation was made. The average mechanical cost—printing, engraving, and paper—was eight cents per copy. Editorial expense, postage, and overhead would run this up considerably above eight cents.

Some fifty-seven companies had suspended or discontinued their house organs, mostly for two causes: the high cost of production of the magazines; or downright failure, due to the waning of editorial ideas and punch after the first few issues. Other causes given were lack of time and talent for editing and sudden growth (especially during the war) that made selling efforts superfluous.

Some few firms, says Mr. MacBride, did not praise the house organ. One gave a scathing comment which we repeat for its grain of warning:

Nine hundred and ninety-nine out of one thousand are worthless, being a mere hodge-podge of clippings of poor jokes and other uninteresting junk that appears to be exactly what it is—something thrown together at the last minute so that the organ can get to press. The trouble is that these things are deficient in brains for the reason that no one has labored in their production.

Per contra (perhaps because they were edited with brains) there are seven organs whose average age is 17 years, with the patriarchal *Browning's Magazine* of Browning, King and Company confessing to being in its thirtieth year, with a circulation of 70,000. The conclusion of the author is the nub of the whole matter: That a GOOD house organ IS READ, and can be regarded as a valuable aid in modern advertising and merchandising.

CHRONICLE AND COMMENT

AMERICANIZATION

Under the heading "Americanization Notes," *The Westinghouse Electric News*, issued at East Pittsburgh, Pa., by the Westinghouse Electric and Manufacturing Company, prints information about naturalization for the foreign-born employees of the plants. Besides giving the laws concerning naturalization, the magazine publishes the names of employees who have become citizens during the fiscal month.

Following these notes are announcements of classes in English and Americanization as well as scholarship news for Westinghouse students.

"SHOW YOUR HAND"

An interesting series of articles running in *The White Book*, published by the White Motor Co., Cleveland, are headed "Know Yourself."

The articles are continuous and deal with the science of the hand or professional handreading. The various lines of the palm, the fingers, and fingertips with their special significance are outlined and treated in a unique manner.

The hands of executives, artists, and laymen are described. The palms of various employees in the plant are read although the names of the individuals are not mentioned.

"SAFETY FIRST"

The management of the Washburn-Crosby Mills announces in *The Eventually News*, that in order to avoid hold-ups and robberies, not only of individuals but plant messengers, salaries would be paid by checks instead of cash.

This decision was reached at the regular meeting of the Employees' Executive Committee and representatives of the management. Besides the danger to the individual, the offices and the automobiles known to be carrying money to the plant are liable to be held up and robbed.

Arrangements have been made with the local banks to remain open until five o'clock

on Wednesdays to cash the employees' checks.

The employees at the plant, while preferring payment in cash, are considering present conditions and have no objections to receiving checks, particularly if arrangements can be made to have them cashed without difficulty.

EDUCATIONAL NOTE

Standard Oil Company employees, according to *The Stanolind Record*, are given the opportunity to go to night school. The committee on education of the Joint General Committee at Wood River, Indiana, is co-operating with the school board of the town in an effort to organize evening Americanization classes for foreign-born employees.

The school board will furnish the building, light, heat, etc., but a tuition fee of \$10 is charged to every Standard Oil employee who takes the course.

LOANS TO EMPLOYEES

The employees of the Walworth Manufacturing Company, says *The Walworth Craftsman*, are to have their own credit union. This co-operative organization will have power to accept savings and make loans to the employees.

Considering the fact that Walworth employees have through various means, such as Liberty Bonds, War Savings Stamps, Christmas Clubs, and Vacation Clubs, shown not only an ability but a disposition to save, it has for some time seemed desirable to have a definitely organized and unified method for receiving and handling such savings. In the same manner, our experience during the past few years has shown that there are continuous demands on the part of employees for small loans ranging from \$10 to \$100 and more; that frequently the lack of money in an emergency has resulted in wages attached, extortion of the loan shark, and expensive instalment buying.

A representative group of Walworth employees have sent in a petition to the Board of Bank Incorporation and a charter has been granted. The arrangements to com-

plete and perfect the Walworth Credit Union organization are being handled by the employees of the company. The company is furnishing the necessary office space and equipment to house the Union and will aid, for a time, in furnishing clerical assistance for the employees.

THE HOUSING PROBLEM

The Timken Roller Bearing Company at Canton, Ohio, publishes the following letter in *The Timken Triangle* to the employees:

To All Timken Roller Bearing Company Employees:

The inability of many of our employees either to rent or buy suitable homes at reasonable figures because of the acute house shortage and the high rents and prices asked for many of the houses in Canton, induced us to undertake the large building and development project known as the Maryland Road Development.

Very soon the 285 houses in our Development will be completed. These homes will be offered for sale to our employees on a small cash down payment and on long easy terms at actual cost to the company.

All the materials used are of the very best quality. The best workmen have been employed. All of the officers of the Company have taken an earnest and active interest in this project. All materials have been bought wholesale and for cash, our Purchasing Department supervising this buying. The result of these combined efforts is that we have 285 homes of highest quality in a choice residential section of the city, offered at the very lowest possible cost and far below the cost of other new homes in Canton similar to these.

All utilities are in—water, gas, electricity, storm and sanitary sewers, improved roads, concrete side-walks and curbs. A healthful and attractive scheme of landscaping has been followed which will, we know, produce one of the most beautiful dwelling communities in the country.

We invite all our employees and their families carefully to inspect this Development and these homes; to note the substantial character and completeness of each house, the curving and well-made streets and side-walks, the beautiful grouping of the houses, the cozy and "homey" feeling of the whole project; always bearing in mind what added attractiveness will appear when the lawns, trees, shrubs, and vines are grown up and when the homes are all occupied.

I repeat that we offer these homes to our employees at actual cost, without one cent of profit to the Company; with the knowledge that the

man who owns his own home, built in a substantial manner, located in a beautiful section, and bought at the right price, is a happier man than otherwise; and all of us are better workmen when we and our families are happy.

(Signed) H. W. TIMKEN,
President

This is one company's way of solving the housing problem. Following Mr. Timken's letter the magazine publishes all the data about the houses, their location, construction, design, rooms, and other details for the information of the employees who are interested in taking advantage of the opportunity of owning their own homes.

LABOR LAWS

Believing that a better acquaintance with the Child and Female Labor Laws would be beneficial to all our readers, *The Feather Vane News*, the employees' magazine of the Worthington Pump and Machinery Corporation, will cover by a series of articles the General Code of Ohio relating to this subject.

This announcement heads a series of short articles which outlines the laws as found in the General Code of Ohio. These articles will be published monthly until the Code is completed.

COLLECTION METHODS

A New York banker remarked recently that, judging from the many business statements he had studied, the average metropolitan retail merchant was so eager to make sales that he neglected the just as important detail of making collections.

The 42nd, published by the Carey Printing Company, Inc., covers the matter of collection letters in a very unique manner:

"Business is pretty good, but collections are rotten," is heard frequently outside of retail circles. Slow collections are an inevitable symptom of business readjustment and deflation.

A model collection letter is given as follows:

Gentlemen:

The only thing in the wide world that we can find the matter with business is just this:

There is not enough money in circulation!

This condition can be easily remedied. And we'll do our share if you'll do yours.

If you will send us a remittance of \$... to balance your account we will immediately see that the amount is kept circulating. Then we will both sleep better for having done our share to place business back on a normal basis.

EMPLOYEES AS PROPRIETORS

In recent years many large corporations have made it possible for their employees to purchase stock through the company. It has, of course, also been possible for any employee to purchase in the open market whatever stock he desired.

The setting aside of blocks of stock for purchase by employees is the usual method pursued when it is desired to increase the employee's attention to his work.

C. A. Coffin, Chairman of the Board of the General Electric Co. in a call for a special meeting of the directors to consider this matter stated:

It has long been the view of the directors that ownership of stock by employees is greatly to be desired, both as a means of investing their savings and of creating a direct and personal interest in the company's welfare. The amount of stock it is proposed to sell to employees is not to exceed fifty thousand shares.

Acquisition of such stock by employees in a large way is not practicable except through some plan permitting the purchase upon instalment payments. Until recently it has not been possible for your company to adopt such a plan for the reason that stock was not available for this purpose. But under the New York Stock Corporation law as amended in 1919, a corporation now may, with the consent of its stockholders, sell stock to its employees.

It is under the provisions of this statute that you are now asked to vote authority to the Directors to sell not more than fifty thousand shares of the authorized and unissued capital stock of the company to its employees.

It is proposed that the subscription price shall be substantially the market price at the time the offer is made, payment for the shares to be made by periodical deductions from payroll. In order that all complexity and detail shall as far as possible be avoided, there will be no allowances or adjustment for interest either on payments made or on unpaid balances; but upon completion of the subscription payments the company will give a credit to the employee which shall represent approximately the net return had he been an actual holder of the stock and had received the dividends thereon from the date of his subscription.

It is proposed that an employee whose subscription is cancelled because of illness, unemployment or other reason, may receive back the money deducted from his pay with interest at the rate of six per cent per annum.

Certificates of stock will not be delivered until completion of subscription payments.

FOREMEN'S CONFERENCES

The Erie Plant of the General Electric Company has started a series of conferences of their foremen. These are held under the general direction of David E. Scull, Supervisor of Industrial Training.

Their purpose is to bring together the foremen of the various departments in small groups to give them by means of directed discussion, a better understanding of their responsibilities.

It is planned to organize the foremen into groups which will meet for daily instruction five times a week for periods of six weeks. As fast as each group completes its course, other groups will be organized to take up the same course of discussion and study. In this way all foremen will have the benefit of the six weeks' period of instruction.

THE EASTMAN KODAK CO.

An extensive educational plan to train its employees has been put into practice by The Eastman Kodak Company. During twenty-five weeks of the year classes will be held in the evening. Some classes will meet once a week, while others will meet twice a week.

The course is so planned that subjects which cannot be covered in a year may be pursued another year. For example, the course in physics is divided into three sections. Course I—Mechanical, Course II—Electricity, Course III—Light and Heat. Good results should accrue to the Company from the increased ability of its employees.

INDUSTRIAL INSURANCE

The employee insurance plan of E. I. Du Pont de Nemours & Co. has been rearranged so as to include a total and permanent disability provision. Under the new plan every employee of the company who has been in service a minimum of six months is protected in case of accident. The benefit accruing in the case of entire disability by bodily injury or disease amounts to from \$1,000 to \$1,500 depending upon the employee's length of service. The insurance money may be paid in two, three, four, or five annual instalments as the employee may desire.

ADMINISTRATION

The Journal of Business Analysis and Control

MARCH, 1921

QUALIFICATIONS OF GOOD EXECUTIVES

BY HENRY S. DENNISON*

PROBLEMS of management are, roughly speaking, threefold—as they arise in connection with materials, machines, or men. Knowledge of materials and machines is a technical qualification taken for granted. However, until recently either it has been thought unnecessary for an executive “to bother about human psychology,” or else such knowledge has been taken for granted as an innate qualification. But upon reflection it is discovered that perhaps there is nothing about which we *practically* know less than “human nature.”

The executive of middle rank has three groups of men to deal with: first, those who map out his work and co-ordinate it with the work of other departments and divisions; second, his fellow executives; and finally, those whose work he directs. If he cannot co-operate with the foremen of another department, or the superintendent of another factory in kindred affairs, if he cannot co-operate with the head of another division of the business, the sales division, or the clerical end—he is creating internal friction which is sheer waste.

Most interdepartmental frictions arise from misunderstandings which may be most readily avoided or cleared up by executive conferences conducted on the committee plan, skilfully guided, with free and frank critical questions and fearlessly truthful responses. If such group executive conferences are not held frequently enough to make much progress possible in practical co-ordination between coexecutives, all possible opportunities, such as lunch hours, for example, ought to be utilized for man-to-man discussions, to get from and give to each other as much understanding of mutual problems as possible. In other words, personal human contact, frequent and for considerable periods, is one essential for a thorough-going, fruitful spirit of co-operation.

But it is with those qualities and qualifications of the executive which fit him to deal efficiently with the group whose work he directs, that the larger part of this article must deal.

Human nature may be said to consist of certain predispositions or tendencies—usually called “instincts.” Of these the strongest is preservation of self and family. This means the maintenance of a certain standard of living

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and is ordinarily called the "economic motive." Most of us have made the great mistake of assuming this to be the *sole* valid motive, or at any rate the only one worth consideration—that if we provide the worker with adequate opportunity for satisfying that motive our conscience is clear; there is nothing more we need, or indeed can do.

This is one of the mistakes which the science of social engineering must overcome if any considerable progress is to be made. Though always dominant, the economic motive is not necessarily predominant. At any rate it is never the sole motive. There is, for example, the craving for self-respect, man's natural regard of, as well as for, himself. And yet in factory management this instinct is by no means considered, let alone respected, as it should be. The public "call down," for example, does little good, and it always does harm. Whether warranted or not, a public rebuke arouses an inevitable desire to "get back" regardless of consequences. Lack of courage, of opportunity or of capacity may make it impossible for an employee to satisfy that craving. But the craving remains covertly if not overtly satisfied. To say the least, his active good-will and co-operation, and his best efforts to accomplish, to "produce," are for the time being inhibited or crippled.

This negative side of the picture, however, is mentioned simply for emphasis. Positively it does not take long to discover the necessity of an environment and a system calculated to arouse and maintain a man's self-respect, and to turn it into the channels of better and greater productivity. Every manager has had certain experience with this demand of the instinct of self-respect. The cleaner the surroundings, the more orderly, convenient, and businesslike one can have

them, the more the worker feels himself to be a part of something that is respectable and worth while.

Friendly, or, if you please, decent consideration shown to each individual, especially when seeking employment, "pays." It makes him "feel like a *man*" dealt with on his own merits, as one coming in of his own accord, rather than as so much mere "material" given a shove at the door and landed into the factory somewhere, ignorant of his environment; uninformed as to why he is set to work at that particular job; unacquainted with his working neighbors; not even having a name—that most intimate part of a man's personality—being a mere number as if tagged for time-clock punching.

An analogy of the worker with the customer is suggestive just here. When a customer comes to the factory the management seeks to make the best possible impression on him, knowing perfectly well how far first impressions carry, and how long they last. Would not similar consideration pay in the case of the worker? His first impressions count too. When someone considered from this point of view the room provided in our own factory for the reception of applicants for employment, we promptly remodeled and reequipped the place. This change involved no moral issues whatever; simply practical business values. Such things count because they pay. The executive should therefore seek to encourage this human instinct for self-respect as an element of practical value in the stimulation of both quality and quantity in production.

There is another tendency, the true nature and value of which is not commonly understood, let alone encouraged, or even tolerated—the desire for self-expression. This instinct most often takes the form of talking back or of "getting something off the chest."

When a man comes with a kick or what to him may seem an important suggestion, shall he be told: "I am paid to do the *thinking*; you to tend the machine?" Such action puts the lid on the desire for self-expression, and if the lid is clamped down hard enough, it is bound to blow off some day.

On the other hand, this desire for self-expression is one that can be developed into an extremely valuable co-operative force. This desire is sometimes called the "instinct of workmanship"—for there is not much doubt that the desire to produce something *well* is very common. We all like to "show off"; to demonstrate to our fellows that we are quite worth while and are really paying our own way in the world.

Many employers have this instinct harnessed up productively in suggestion systems. Whatever their practical money value, such suggestions, invited encouragingly rather than perfunctorily tolerated—unquestionably have the tendency to stimulate the worker's self-respect through self-expression.

Another decided and deep-seated instinct is man's innate disposition towards loyalty to somebody or something—preferably some person. If factory managers have not taken care that the worker has the sort of leaders among department heads, superintendents, and foremen who engage his loyalty, these factory managers are almost certain to discover the worker's outside loyalties and their effect on his work. The workman may find his loyalties in the lodge; he may find them in labor leaders. Find them he must. Follow them he will.

The war evidenced the tremendous force of that instinct. Prevalent as it is, however, it has been much misunderstood, misinterpreted, and mis-

used, as shown by the assumption of many an employer that his men ought to be loyal to him simply because he gives them a job, though himself failing to do anything to generate and to foster a disposition to personal loyalty.

Another instinct is that of fear—the enjoyment of risk, on the one hand; on the other, the dread of loss or poverty. The timidity of capital is proverbial. In case of the laborer, there is a more or less recurrent if not constant dread of unemployment. The older economists counted upon the whip lash of possible poverty as a necessary element in the interplay of supply and demand. But another instinct, no less potent, is the desire for gain and possession. This tendency is so decided that I have never been deeply concerned about Socialism or Communism. Man's deep-rooted, instinctive desire for ownership shows itself in youngsters of two, three, and four; nor does it ease off as they grow older.

It is evident, then, that the wise executive should give as much thought to the study of human material as to raw material and machines. But in connection with his study of men and women there are one or two other points worth remembering. Most executives have themselves risen from the ranks of the workers. Yet they have a rather common failing: an inability to put themselves in place of the workers under their authority. Many a foreman and manager, in his day as a worker, associated for the most part with those who like himself fought their way through and up. The fellow worker he recalls with approval is not one of the common run. The worker he remembers is more likely the one of exceptional strength, aggressiveness, intelligence, success. Also he recalls his own best and most appreciated qualities and mental attitudes—the things that enabled him to get ahead.

Yet the very fact that he is now himself an executive is proof that he was an exception in the workers' ranks. He must not assume that the majority of workers are of the same aggressive material and disposition characteristic of his own dominance.

No matter what methods and plans the study of human nature prompts one in authority to install, it will be necessary to allow time before the results can be fairly judged. Persons having anything to do with chemistry know that mass-action is slow action. Those who fought with the army know that the larger the body of men, the slower its rate of motion. To change materially the mental attitude of so few even as twenty men is a matter which takes persistent, untiring effort. I have known a man who got his industrial religion on Tuesday afternoon, put it in effect on Wednesday morning, and then kicked because on Thursday noon his men were not already with him heart and soul. I have known plans of workers' councils and profit-sharing schemes to be thrown out because in a three years' trial they had not yet been made to work. Yet one cannot be certain, even at the end of three years, about a plan affecting the productive morale of hundreds.

We ourselves started in 1911 a partnership plan among the executives in the concern and in 1915 one could hardly tell the difference. The plan had not "got across" in that short time. But a year later it was possible to tell a lot about it; and now there is no doubt whatever as to its success. If in following a course intended to win

the good-will of employees one does not secure immediate or even early results, there is, so far forth, no need for discouragement.

MacKenzie King in his "Industry and Humanity," a book formidably long but full of meat, says:

Men whose work is that of directing other men cannot be too considerate in attitude, too attentive to irritations, or too impartial. The art of obtaining co-operation by methods other than those of force requires some understanding of human nature, and a little sympathy with its shortcomings. Men who do not possess these qualities, in addition to technical knowledge, should never be placed in positions of authority. Companies that have dismissed salesmen who have forfeited sales through carelessness, indifference or ill-temper, have not hesitated to retain foremen and bosses who have been most indifferent to working conditions, and harsh and ill-tempered in dealing with employees. Employers should recognize that an official who disregards the well-being of his men is as much a source of danger to the industry that employs him, as a neglectful officer in the army is to companies under his command. Good-will of employees is as desirable as the good-will of customers.

This is substantially the same thought I am anxious to present in this article. There is a very close parallel between the treatment due the employee and the customer. Business cannot be carried profitably without both of them. Neither of them alone assures profits. The customer's good-will account has been written right into the soul of the balance sheet. Everyone knows it is worth while. How about the internal good-will account—the good-will of the employee?

CHARTING THE ORGANIZATION

BY GLENN G. MUNN*

TO the uninitiated the organization chart, suitably mounted and framed and suspended on the wall in the place of honor behind the president's desk, may seem a piece of decorative bric-a-brac hardly worth more than a passing glance. Like the genealogical tree of the president's wife, the diagram seems designed more for looks than for use. It is a little foible of the president to depict in this way the importance of his relationship to the numerous activities he controls and the complex ramifications of his business, just as his wife likes to show off her relationship to her carefully selected ancestry and the complex ramifications of her family tree. If the president likes to amuse himself tracing the numerous lines of the chart to the many rectangular boxes to which they lead, his hobby is harmless and inexpensive. That his study is something more than a game or relaxation and has any useful and practical purpose behind it, the uninitiated do not believe.

II

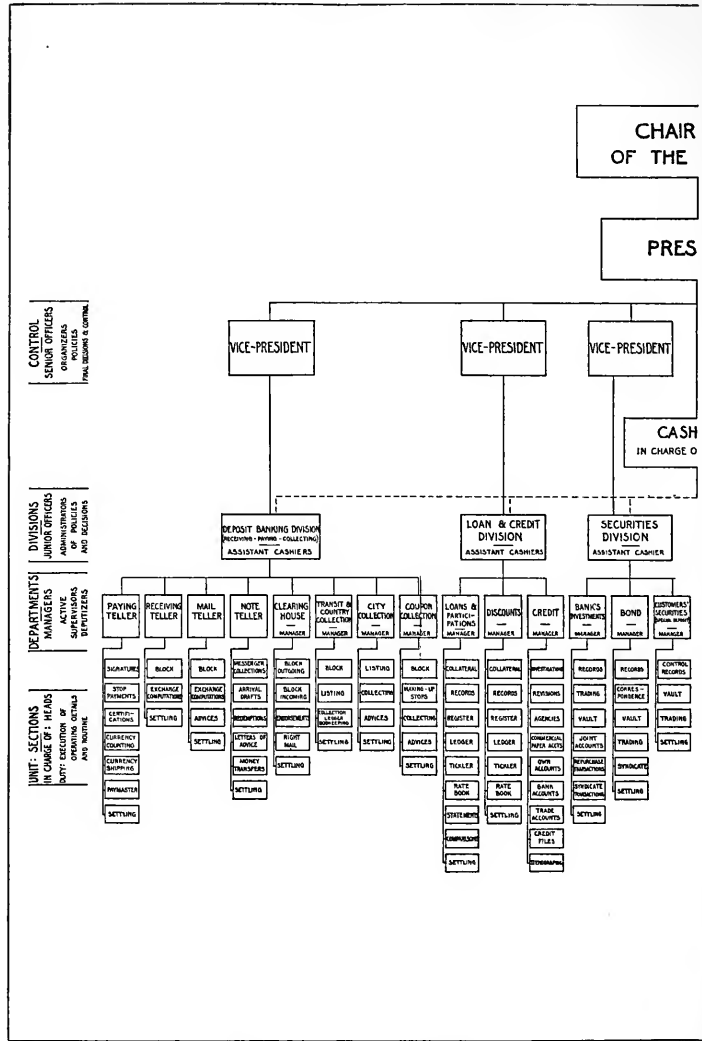
The analogy between competitive business and a game has been so frequently drawn that the comparison has become trite and hackneyed. Nevertheless it cannot be too frequently emphasized that the members of a business organization are players in a great game. If they are to pull together with the concentration of purpose and unity of effort, that is, the mark of the perfectly balanced team, they must learn the technique and

observe the rules and signals of the game. An organization in which executives and employees do not know or do not clearly see the relationship of their work and duties to the whole business scheme, is like a football team without a formation and without signals, each man playing a lone hand and often at cross-purposes with his team-mates. However able the president in such a business, he is only a star player in a poor team. His organization is doomed to defeat in competition with the organization that depends upon team-work and a carefully devised formation for the execution of its plans.

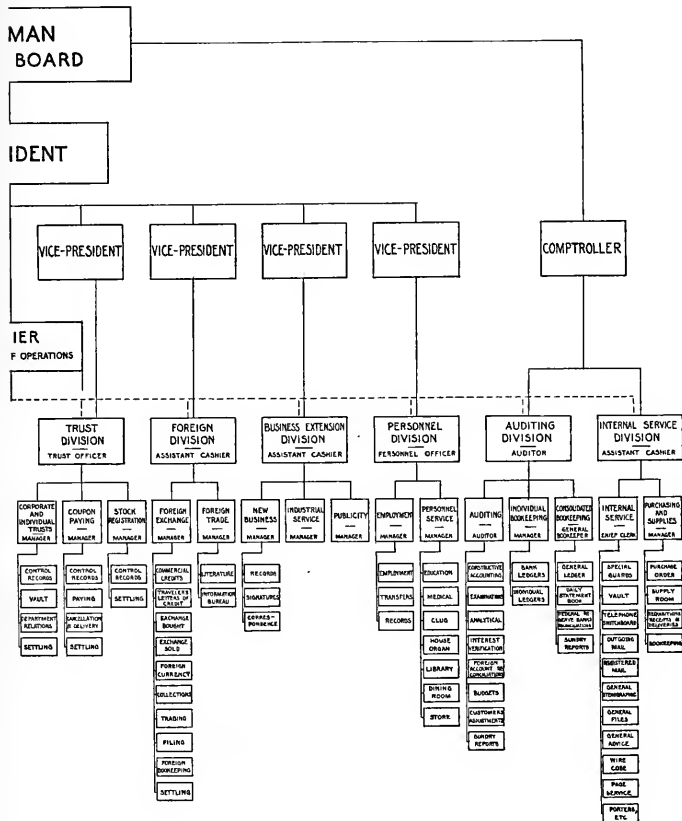
The formation for playing the business game is shown on the organization chart. Such a chart pictorially represents the duties and responsibilities assigned to each employee. The relations of employees are shown by the relative position of each rectangle on the chart. The lines of authority are indicated from the president down to the rank and file. To play the game successfully the formation must be thoroughly understood. Each member of the team must know the part he is expected to play, the corresponding responsibilities of this part and from whom to take his signals or orders. Failure to understand lines of authority and responsibility is answerable for much of the friction and wasted effort always present where there is a lack of team-work in a complex organization.

Every business has an aim if not an end in view. To carry out this aim, certain duties and functions have to be performed and certain employees are

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FUNCTIONAL ORGANIZATION CHART



FOR BANK OF \$15,000,000 CAPITAL AND SURPLUS

made responsible for their performance. As a preliminary step to drawing up a chart of these functions and responsibilities, the draftsman makes a canvass of the personnel to determine the duty of each employee and the department to which he belongs. Thus he asks Bill Smith, "What do you do?" If Bill Smith answers, "I am office manager. I have charge of the stenographers, typists, stationery, mail correspondence, and files," the function of office manager is depicted on the chart in a little rectangular box underneath which appear the smaller rectangles representing the number of typists, correspondents, filing clerks, and so on, whom Bill Smith controls and for whose work he is responsible. Such a picture of the activities of the business and of the lines of control is useful so far as it goes, but it does not go far enough. It merely shows what employees in the organization are doing. Investigation and study are then required to find out if the work individual employees are doing is necessary, or all that they can do, or more than they should be expected to do, or done in such a way as to make control easy, or fix responsibility when mistakes are made.

III

In drawing up the chart many difficulties will be encountered in the formulation of duties and functions because of the certainty of finding the organization loose and out of joint. Responsibility for final decisions will be a difficult matter to pin down. There will be overlapping of functions here, of duties there, and of executive power elsewhere. Especially are the duties and functions of the officials above the rank of department heads apt to overlap. As a rule executives do not like their energies confined to

specific duties and not a few officers are resentful of any attempt to curb their sphere of influence. When the functions of officers are not definitely fixed, it is impossible to pin them down to certain duties and responsibilities. Where responsibility cannot be fixed, inefficiency is sure to creep in.

If the business has been allowed to grow without the charting of its course, the preparation of the chart showing the organization as it exists is likely to reveal many defects and much "out-of-jointedness." Most growing enterprises expand when and where they will, as needs dictate. Hence in an organization of any size a chart is required to show clearly the functions that are duplicated or unnecessary or becoming obsolete; or the duties that are handled by the wrong employee; or the departments that are under- or over-manned or under- or over-supervised; or the individuals upon whom too much responsibility is placed; or those upon whom more responsibility might with advantage be placed. In other words, before the burden of work can be fairly and evenly distributed, so that each may carry the share of the load to which his experience and ability entitles him, there must be a bird's-eye picture of the whole business scheme showing what everybody is doing and to whom he is responsible. Such preparatory work is essential before as perfect an organization chart can be built up as the available talent and ingenuity can devise.

While an organization chart cannot minutely describe every duty and function, it can at least show who is responsible for the execution of work in any division, department, section, or unit of the business. It can show whether the duties are co-ordinate or subordinate and indicate their relative importance. It can definitely connect certain individuals with spe-

cific functions and duties. Where functions overlap and lines of authority run in two directions, it is not easy to limit and fix them unless a chart is drawn up showing the ideal organization as it should be. It is true that in a small organization responsibility can be located without the aid of a chart, but in a large organization it is safe to say that somewhere functions overlap and to that extent are duplicated, or are not clearly outlined, in which case the responsibility is lacking.

Only when functions are pictured in chart form can every member of an organization clearly grasp the nature of his duties and the extent of his responsibilities. No one can fully understand his work unless he understands how it relates to other functions and to the whole organization. No unit of work is so isolated or so sufficient unto itself that it has no contact with other units of work. Mail orders, for instance, are received by the incoming mail department, passed on to the sales department, thence to the credit department, and respectively to the merchandise, shipping, and accounting departments. If a mistake occurs in the filling of an order it is difficult if not impossible to place responsibility for the error unless somebody is held to account for each of the many clerical operations through which every order passes before it is shipped to the customer.

An organization chart, by picturing all functions, shows just who is responsible for their performance and execution. If one person performs several functions, that fact is exhibited. No one can be held responsible for another person's mistake. Each person, however, is held accountable for the proper fulfillment of his own duties. By pinning responsibility down, errors are located and "passing the buck" is no longer possible.

Merely to locate responsibility, however, is not the only advantage of charting an organization. The chart serves many useful purposes in the daily routine. Those in higher executive positions who do not usually come into contact with the actual operation of the business can make considerable use of an organization chart. At a glance they can tell how lines of authority run and who is responsible for the execution and accomplishment of each activity, when it is necessary for certain details to be attended to.

Again, the grading and classification of work requires first the preparation of a chart. The task of assigning proper titles to the chiefs of divisions, departments, and sections is then an easy matter. The allotment of titles to the supervisor of units of work is important because there is a clear relation between such titular distinction and the incentive to endeavor. The organization chart will show the comparative rank of each of these titles.

By means of a chart it is possible not only to divide the activities of an organization into divisions, departments, sections, and units, but to analyze further a unit of work into particular jobs, and to determine the qualities that are necessary for their performance. Job analysis is defined as "the resolving of a job into its component elements and the determination of the human qualities for the successful execution thereof." In a large organization this analysis is extremely important in selecting men to fit particular jobs. This chart directly ties up with the work of the employment and educational departments in the proper selection and training of men.

The chart will also show the progression or sequence of jobs, that is, what a particular job naturally leads

to. This is again helpful to the personnel department in pointing out the natural line of promotion. It is also important from the standpoint of re-assigning men to different jobs when it becomes apparent that they are not succeeding in the job to which they were originally assigned.

By showing co-ordinate and subordinate functions and by distinguishing between employees who are organizers, supervisors, and detail men, the chart is a means of determining the relative importance of jobs and therefore their relative value to the business. The determination of salaries is, of course, a matter based on the value of a man's services.

Business policy is largely dependent upon the showing of the profit and loss statement. Likewise department policy depends upon the profit and loss results of each department. Before the accounting department can allocate gross profits and expenses to departments, it is imperative to define their exact boundaries and scope. A chart is therefore a necessary tool in any cost analysis scheme for determining the profits and expenses of departments. Likewise, if departments are to be placed upon a budget, it is necessary to know precisely what the expense of each department includes and what it excludes.

IV

Big business organizations realize the increasing importance of training their employees in their own methods and procedure. By analyzing duties and functions and showing the relation between divisions, departments, sections, and units, a chart is valuable in the work of the educational department where employees can study the part they are to play in the business game. The diagram shows each em-

ployee just where he belongs in the organization scheme, for what he is responsible, and to whom he is accountable. Illumined with this information his work is done the more intelligently.

Another practical use to which the organization chart can be put is in the transfer of employees from one department to another. The personnel officer should have a chart large enough to visualize the complete organization, showing the names of the officers and listing the employees in the department to which they belong. The names of the officers and employees should be inserted in their proper places in such a way that changes can be readily made.

Such a chart should visualize the number, names, titles, jobs, and ability of the employees in each division, department, section, and unit. By the use of different colored pins, it is possible to designate employees who have special ability or experience, as, for instance:

1. Red pin—Has finished special training course.
2. Green pin—Routine or detail men only.
3. Black pin—Potential executive.
4. Blue pin—Has been temporarily transferred to another department.
5. Yellow pin—Has had experience in several departments, etc.

Such a chart is a running inventory of the personnel—both quantitatively and qualitatively. It is consulted when vacancies are to be filled and employees promoted, or when temporary pressure in one department requires the transfer of employees of a certain type from other departments. Given such a chart, transfers can be intelligently made by any executive. Data which otherwise would be known only to the employment manager or be buried in a card file, is graphically presented so that all may see and read,

CHAIN STORE OPERATION

BY EDWARD WISE*

IN the administration of a chain of stores there is no fundamental need that stands out with greater distinctness than that of capable executives. While this assertion holds true of the management of any undertaking, it is especially true of an organization divided into a large number of units, each of which functions as an individual link in an extensive chain. Though the standardization of many store operations reduces the necessity for personal decision and initiative, yet certain discretionary powers must be vested in the management of each store. Thus the success of such a concern depends upon the careful judgment and the power of a large number of individual employees in enforcing the general policy of the organization as a whole.

In the operation of our chains of stores we are always on the lookout for the essential executive qualities and it is our firm and fast policy to find and develop them. We aim to give our men every chance to show what they can do. That most of them take advantage of their opportunities is demonstrated by the fact that, not one or two, but many of our clerks, starting at \$15 a week, have reached posts of the highest responsibility on the directorate of our organization. Such executives have won their advancement through the sane application of their mental processes to the interests of the business in which they are engaged and they have revealed unusual ability to carry through the results of their decisions.

It is this policy of building up within our own organization executive ability which later controls its destinies that gives such stability to the United Cigar Stores Company. Its directorate is composed of a group of men who have worked out its problems from the foundation up, and who have had their feet on every rung of the ladder from ground to summit. This experience not only gives each executive a thorough insight into the proper performance of routine duties, but it also equips him with a broad grasp of the problems of management and makes for perfect co-ordination and unified effort.

A glance at the make-up of the directorate of the company will give an excellent idea of its promotion policy. The board is composed of the Chairman of the Board, the President, Acting President, and fourteen Associate Directors. Each of these directors sits at his desk daily directing the affairs of his own department and all are in close touch with each other with the same ends in view. The fact that our board includes no figureheads but that each member is one of a working force of officers who have not only helped us in formulating the policies of our organization, but are actively engaged in carrying them out, makes for the unity of aim and effort so necessary in the management of a large scattered enterprise.

From the very inception of the company we have held closely to this policy of promotion within the ranks, and as we continue to expand we are unceasing in our search through the organization for men who show poten-

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tial ability. The road of promotion is clearly marked with such milestones as "Clerks," "Store Managers," "District Sales Managers," "Superintendents," "Assistant Vice-Presidents," to the goal of membership in the directorate, which carries with it the title of Vice-President. On our present board of directors are six recently elected members who have all served as heads of departments or assistants, in this way fairly earning the distinction of belonging to the board.

We have found this policy of management of the utmost value in our administrative methods. Proper co-ordination of aim and effort is only possible where a board functions through the heads of the various departments of a business. Men who have acted in most of the executive capacities in an organization such as ours are likely to have a pretty clear understanding of each other's needs and difficulties, and the methods necessary to bring these plans about.

A directors' meeting in this company is something more than a perfunctory function appointed for a certain day. It is a serious getting together of hard-working departmental heads who are given authority to act on the problems which arise in the administration of specific duties. This contact of the company's directors with actual working conditions and their close association in the study of the company's interests cannot but make for better feeling, greater efficiency, and a more unified organization.

In discussing the organization of the United Cigar Stores Company I am taking as a basis for this article the experience gained in our original chain. The Company was organized about twenty-one years ago. Today it operates about 1,500 stores and 700 agencies, scattered all over the country, with a business last year of something over

\$80,000,000. In building up this chain we have had an excellent opportunity to try out experimental methods, deleting some and amplifying others, until we feel we have reached standards of operation and control adapted to our needs.

In the development of our business we have sometimes found it desirable to absorb certain small chains. But in opening new stores of our own we have never deviated from the principle that we were able to render better and more efficient service, because in standardizing our methods we have carefully eliminated everything that did not make for the best possible service at the minimum of overhead with a view to the lowering of price to our patrons. To this end it is necessary to consider the proper value of rapid turnover and therefore we have set a standard of turnover for every thirty days.

Our policy of rapid-fire selling is of course based on the careful location of all of our stores. In their selection we use what might aptly be termed a "scout system," and I am frank to say that the men in our real estate department who choose the location for our new stores have a foresight that is almost uncanny. It is not at all uncommon—in fact I may say it happens almost without fail—that they return from the selection of a location and with their report turn in an estimate of the business we will do there during the first six months that often coincides within a couple of hundred dollars of the actual amount taken in during the first six months that store is in operation. Naturally these men use all possible means of securing information about a town or locality before they attempt to select the spot, but they have so developed their intuition and powers of observation that they have become wonderful judges of the fine

points that enter into the choosing of a place for a new store.

Our method of selecting store locations opens up a question that is often discussed in the operation of a chain of stores. We are frequently asked whether we feel we are losing business by not opening more stores in a specified location. It is a not unusual argument that if there is a store within a reasonable distance the people who want our goods will naturally go out of their way to get them. This happens more often than we realize, but actual experience as well as scientific demonstration has proved that, especially in large cities, people follow a beaten trail. Therefore, in crowded centers of population we do not hesitate to open a store directly across the street from one that is already in operation if we find that traffic past the new place appears to warrant such an increase in business arrangements. Moreover, in cities where we have tried out this policy we have found that our business does not fall off in the old store and that in the new location it fulfils our expectations.

It is said that we were pioneers in the system of "clocking" our locations before making a definite decision to branch out, and this belief is so widespread that we frequently get inquiries as to whether we really follow the method and how much we rely upon it. All honors in this respect go to our real estate men. Their system is efficiency plus. In large cities they study carefully the general trend of traffic, they estimate the hours during the day when a certain number of people will pass a given spot, and they study such local conditions as proximity to manufacturing plants, factories, or other large enterprises. In the smaller cities they make an even more extensive survey, carefully choosing locations on streets that are popular

thoroughfares where the masses are wont to congregate. They also make a close study of racial characteristics—a matter which has a vital relation to the purchase of certain commodities. In deciding upon the location of a new store their calculations are made with such exactness that they rarely have to repeat the survey.

A few minor matters to which we pay attention are worth mentioning because of their seeming unimportance. A condition we avoid in opening a store is raising it either a step above or below the street. We floor it exactly to street level. Also, in the construction of a corner store we try to set the entrance to one side so that the center of the store can be seen and easily reached from the street. The entrance then makes a pleasing impression, gives ready access to counters, and prevents congestion. It is curious how the public appreciates these seemingly insignificant details. For instance, the effect of opening the doors of our shops whenever weather conditions permit results in an almost immediate influx of trade. This is especially noticeable in congested districts and is explained by the psychological attraction of open space and the air of welcome it offers to passers by. Another thing that unconsciously attracts the eye of the public is the day and night lighting of our stores.

In view of the fact that a chain of candy stores has recently been opened under the financial supervision of the holding company (United Retail Stores Corporation), it is interesting to note that this competition has not in any way affected the volume of candy sales in our cigar stores, which runs to over a million dollars a year. It is estimated that 80 per cent of the candy purchased is bought by men, a fact which shows the possibility of expansion in this line.

As the heart of all business is the selling end, so all the other departments are more or less like arteries which must feed it with undiminished vigor. We hold our finger on its pulse by means of our sales records. When there is any sign of falling off of business in a given locality, we take swift measures to ascertain the cause. All sales are reported daily by the managers of the stores, thus enabling current sales to be compared with the business on the corresponding day of the preceding year. In this way we are able to make a careful comparison and an estimate of growth.

The country at large is divided into five districts, each one of which is under the supervision of an Assistant Vice-President, who travels continually. Under his supervision are groups of District Sales Managers who keep in even more intimate touch with local stores. These District Managers are in direct charge of about fifteen stores in one city, or an approximate number in a more scattered territory, allocations being made according to traveling facilities and the distance between stores. We make careful estimates of what we believe should be normal gains in trade, and these men act in an advisory capacity to promote sales. At certain times of the year we have authorized a telegraphic night report of sales; on one day last December our total sales amounted to more than a million dollars.

In paying our men for their services we do everything possible to develop their earning capacity. The stores work for business on a monthly rating, and in addition to fixed minimum salaries commissions are paid for increased volume. The ratings are so figured that extra compensation is earned as sales increase. In addition to these commissions we have for several years had in effect a bonus, which we think

very liberal, and which is planned to give to employees in the selling force who rank above Store Sales Managers a strong incentive to increase the volume of business. Under the plan now in effect a total volume for the year is arbitrarily computed and month by month vouchers are distributed based on this volume. The vouchers have a money value, which increases as the volume aimed at is reached. We believe this plan to be the nearest approach to scientific profit-sharing so far devised.

The public knows that there is nothing on which our stores depend for their success so much as on their good service. With us service means every possible appeal to attract and hold public patronage. We never cease trying to make our service better, laying special stress, of course, on courtesy. Recently as a new note in our insistent campaign for courtesy, we have singled out for reward those representatives whose efforts do best uphold our policy. They are selected by test and observation. When their merit has been proved they are presented with a gold watch suitably engraved and with a parchment testimonial certifying to their worthiness to receive this signal form of recognition. The testimonial is really a diploma for high grade salesmanship and the honor gives a new distinction to store service.

Among a personnel of 6,500 and within an organization that reaches from coast to coast and into Canada, there must be plenty of potential executive ability. Inasmuch as the company is gradually extending its operations and our executives are recruits from our own force, we have much to offer to ambitious young men with the ability to see and grasp their opportunities. It would be difficult for the ambitious employee to find any more constructive business training

than that afforded within the organization of a carefully managed chain of stores. Its field offers possibilities of advancement to every capable individual, and there is no boundary line to his ambition. Our cigar sales alone run to five or six hundred million every year, and this means that we need careful buyers as well as good salesmen. The financing of a corporation such as ours demands the ability to grasp present requirements and to visualize the possibilities of future growth. In managing first his own store and later those in a large district, a man gradually acquires a knowledge of human nature and how to handle it that counts no matter in what capacity he may be employed.

Though our methods are standardized in all our chains, we always try to incorporate enough individuality in each local store to attract the trade of its district without deviating in any large measure from the standardized principles we have carefully tested and found to be fundamentally sound.

One of the primary things which attracts trade to our stores is the fact that from coast to coast a man can find the cigar that particularly suits his taste merely by looking for the United Cigar Stores sign. He does not need to search for his favorite smoke. On the other hand, many factors influence the sale of a commodity in a given locality. The stock-in-trade of a store in a busy manufacturing district would differ widely from that of a unit of the same chain in a residential district, and selling in the far West gives rise to many a problem that would not come up in New York City. Fundamentally, however, good selling tactics are the same everywhere, though the strategy involved differs with time and place. There is no better illustration of this fact than the story of the man in South America

who said he sold with one hand on his dress suit, the other stretched out in greeting, and his mind wavering between "Correct etiquette on all occasions" and his knowledge of Spanish verbs. The same principle holds true whenever an organization branches out into new territory. It would be just as impossible to use exactly the same selling methods in New England and in the South as it would be to model a San Francisco business on that of New York City.

Though independent stores can reveal more individuality in their methods of catering to and attracting a particular trade than can those in a chain, we believe nevertheless that individual merchants are at a great disadvantage in many ways. Buying in such enormous quantities the chain organization gets the minimum price for the maximum quality and thus can give its customers the benefit of its buying power. This is only one of the advantages enjoyed by each link in a great chain. Trained executives who are in constant touch with every phase of modern merchandising are able to introduce the most up-to-date and economical methods of handling and selling stock and of locating and conducting stores—thus again giving their customers the benefit of lower prices brought about by a reduction in overhead expenses.

In a large organization the units of which are under departmental supervision, the up-keep of the store and its stock becomes not a matter of personal inclination but a matter of routine enforced by rules and regulations. Thus, cleanliness or the care and arrangement of the stock is not a matter of individual choice but is based on carefully worked out plans to cover all the routine matters of storekeeping. A window display, for example, does not depend upon the taste of the man

who only includes it among the many things he must attend to, but upon the taste and opinion of experts who have not only studied its effect from the artistic side but have also taken into account the psychology of the passing crowd. More and more it is our policy to weed out from our organization the man whose personal antipathies or preferences interfere with our business policy, and to put in his place the man who is broadminded enough to eliminate his personal preferences and bias if they run counter to our policy, and who looks ahead to the aim and end in view.

The connection between the United Cigar Stores Company and the United Retail Stores Corporation is often confused. The organization of the United Cigar Stores Company antedated by many years that of the United Retail Stores Corporation, which was organized some two years ago as a holding company for subsidiary chains. The United Retail Stores Corporation is the controlling body. Each chain has its individual directorate and handles its business under its own officers, reporting to the holding organization only as a corporate body.

Because the directors of the chains take such an active part in their actual operation and are in such close contact with each other, there has hitherto been little danger of undue expenditure. In consequence we have only recently introduced the budget system more as a sound business measure than from any feeling of its financial expediency. A budget has its advantages in permitting a comprehensive review of authorized expenses, and the system will doubtless prove its worth.

We are often asked what we consider the most important factors in a man's make-up when we grade him for promotion. Probably loyalty to the company and close attention to our interests would head the lists, but the *power to give service*, which implies courtesy to the public and pleasant relations with his trade, would stand a man in as good stead as anything I can think of. The man who combines honesty of purpose and loyalty to the company with an active interest in promoting good-will and satisfying our customers, is so valuable an employee to the United Cigar Stores Company that he is bound to climb rapidly up the ladder of promotion.

THE BUSINESS SITUATION

BY A. C. BEDFORD *

THE tragic consequences of war now stand finally revealed to a somewhat disillusionized world. Now that the bubbles of inflation and false prosperity are bursting, the world turns to business as the real bulwark of civilization and as the one force which can start the wheels of progress going full speed again.

My reference to business does not refer merely to "big business." My thought is of all men who participate in the processes of production and trade, whether as leaders of great corporations or as workmen in the factories, in the mines, or in the fields.

The extent to which the devices of statesmanship must in the final analysis stand the test of commerce was very aptly expressed by the Right Hon. Reginald McKenna, formerly Chancellor of the Exchequer of the British Empire. In a speech before the University of Manchester, November 17, 1920, he said:

If money and exchange had been understood by those who framed the indemnity clauses of the Peace Treaty, the substance of an indemnity would not have been abandoned for the shadow of untold millions. A large section of the public is still mystified by our inability to extract these millions, but the lesson must be learned that the wealth of a nation, and its power to pay, are not to be found in the pockets of the people, but in the mine, the factory, and the workshop, and in its national power of production.

The supreme problem of the world today is how to obtain maximum efficiency in production and distribution

of material and goods of which the world is in such sore need. If we could solve this problem the wheels of industry throughout the world would hum as never before, the imminence of starvation and death would be lifted from the lives of millions of people, and civilization would move forward with stability and confidence.

To secure this result is the chief ambition of statesmen. But to attain it will require nothing less than that statesmanship shall accept the advice and co-operation of the concentrated wisdom and effort of business.

Business men of the whole world are becoming conscious of the necessity of developing effective means for determining and expressing the views which the widest business experience shows are in the common interest. I was interested to read, a few days ago, a speech delivered by the Prime Minister of Great Britain, Mr. Lloyd George, who, addressing on December 1, a gathering of the Federation of British Industries, said, among other things:

It is very important that the government should have a body coming to it which speaks on behalf of business as a whole and not as a part. Therefore, I am glad that the great business community, the directing brains of industry, are federating, combining and co-ordinating, and are prepared to give common counsel to the government.

I have been particularly interested in studying the activities of the Federation of British Industries—an institution very like our own Chamber of Commerce of the United States. The British Federation includes practically all the substantial trades in the

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United Kingdom, covers every field of manufacturing energy, and numbers over 19,000 firms and establishments among its membership. It has many domestic activities, but as an English newspaper recently described its functions:

Its normal and constant aim is to examine, enlarge, and safeguard the market for British products at home and abroad.

It seeks to do this by bringing producers and consumers into close touch with one another, by facilitating and promoting smooth relations between manufacturers and government offices, and by encouraging technical and scientific research. Before the war we used to hear much of the Central Intelligence Department and Educational Establishment maintained by the leaders of German industry. Why, it was often asked, do not English manufacturers combine for the same purpose?

That is one of the things the Federation is doing. It brings together the results of individual experiment and study and endeavors to make them available for all who are engaged in British industry. The Army of Industry, like other armies, requires its thinking section, and this the Federation of British Industry hopes to provide.

We live in an era of mass production and mass distribution; the movement is too vast to be dealt with effectively on the old lines of pure individualism and unregulated competition. The Federation of British Industries is not a "trust," but it furnishes its members with some of the advantages and opportunities which the big capitalistic groups obtain for themselves by their own size and richness. It does, in fact, apply to industrial production the health and promising principles of co-operation, wherein perhaps lies the ultimate solution of capital and labor alike.

Is there not a suggestion to America and American business men in the foregoing paragraphs?

I have had opportunity recently to visit Europe to attend a meeting of Directors of the International Cham-

ber of Commerce, and to talk somewhat intimately with the statesmen and business men of that perplexed and harassed continent. I have likewise kept in touch with the business situation in the United States, and have of course been deeply concerned, as have all business men, over the present manifestations of trade depression.

As a result of these experiences, several conclusions are uppermost in my mind:

1. That before the people can again resume their normal march of progress, real Peace must be established and the economic equilibrium of the world re-established.

That means that the whole of Central Europe shall be restored to its place as a producer and a consumer—with harmonious relations within its own boundaries and with reciprocal relations with the rest of the world.

Peace among nations can have no more powerful basis than commerce conducted in a spirit of co-operation and fair dealing. Modern wars have often been the result of economic conditions. Business men know that trade cannot be one-sided. They understand from practical experience the value, even the necessity of reciprocity.

2. The second requirement necessary to economic stability is a radical, sweeping reduction in government expenditure.

The former Chancellor of the British Exchequer recently expressed his opinion that "in almost every country excessive government expenditure is the main factor in forcing up prices." Governments the world over, because of the emergency of war, have embarked upon the conduct of business. The disastrous results, the enormous waste and extravagance of this policy, have been evident to every business man in the United States and to every business man in Europe.

It is imperative that all governments exercise most rigid economies. They must forego costly experiments in conducting business and leave the business of the world to be done by business men, men governed by the basic laws of trade, the laws of fair and free competition. Economic laws govern commerce, and any attempt on the part of a government to take over business and to conduct it supported by artificial laws of monopoly and restraint, or to offset inefficiency and extravagance by taxation, cannot fail to thwart progress and development.

3. The third thought which is deeply impressed upon my mind is that America has become the heart of the world's business.

America controls the very life-blood which civilization must have. It is incumbent upon American business men, with the sanction of the American government, to work out practical expedients under which the resources of America—both moral and material—may be unleashed for the benefit of the world, not as a matter of charity but to insure our own prosperity.

It is little realized to what extent the economic world looks to the United States. Practically all the gold produced in the world since 1914 has on balance come to American shores. We have the only free gold market in the world. The trade balances of every important nation in the world are in favor of the United States. The money of every nation in the world is at a discount in terms of the American dollar. At the recent financial conference in Brussels, trade statistics of the world, through sheer force of facts, were measured not in terms of gold, but in terms of the American unit of value.

The Allied governments owe the American government an unfunded balance of ten billion dollars. It is

estimated that there is a floating credit in the United States, as against Europe, of some four billion dollars, and there is no chance whatever for at least a year or two to come that the world will be able to liquidate the interest or the principal of its obligation to the United States. As a matter of fact, the chances are that by the very momentum of forces now in motion the government and business interests of the United States will, within the next few years, be irresistibly placed in a position of creditor to the rest of the world for a full twenty billion dollars.

These facts represent a perilous situation. They place the United States on very dizzy heights. They create problems for our business structure such as it has never had to face before. It is, perhaps, an heritage beyond our greatest dreams, and the problem is, how shall we use it?

How shall I indicate to the reader something of the situation which confronts American business?

A very careful analysis to which I have had access, of the increase in the physical production of the United States, shows that during the period from 1910 to 1919, whereas our population increased only 13½ per cent, the mining and manufacturing activities of the country increased more than 30 per cent. Of course, our consuming capacity has increased, but not so much as our output. During the war our plant capacity was fully occupied, and was under the most intense pressure to produce war material. Immediately following the armistice there was a great movement of our products to Europe, financed largely with floating credits.

At the present time the physical volume of our foreign balance is falling off rapidly, and even at the high prices of 1920 the balance of foreign trade,

expressed in dollars, was for the year 1920, 52 per cent lower than 1919.

The peak of the demand is clearly past. Foreign orders have been greatly reduced, domestic demand curtailed, and much of the productive capacity of our country is either not utilized at all, or only on a part-time basis.

But there is an anchor to windward which we have never had at the time of other periods of prosperity. On past occasions the other nations of the world were also overstocked with goods. Today, however, the reduction in their demands has been brought about, not by lack of need or desire for our products, but by inability to finance the purchases.

Undoubtedly, within a short time our natural increase in population will again overtake our productive capacity. At that time the natural laws of exchange can again determine our foreign trade balance. But today the increase in the excess of our exports over our imports seems to be the open route to the resumption of prosperity.

The solution of this problem must revolve around a plan of co-operation between the business men of the country, acting always with the cordial approval of our government.

The reader knows, as a matter of fact, that business is not so bad as it is made out to be. There are in the United States 105,000,000 people who are eating three meals a day, traveling in automobiles, trolley cars, steamships and trains, wearing shoes and clothes, and otherwise comporting themselves pretty much as usual. It is true that they are showing a disposition to question the necessity for doing some of these things; they are going without new automobiles, it appears, and asking for lower prices on many articles, but is not that exactly what we have all been urging each other to do? Our economists began long ago

to advise us to make haste slowly.

I wish I could have had the reader with me on a recent trip through the devastated area of France. There is a country where pessimism might be excused, where death and disease took a terrible toll through four harrowing years, where the monuments to the industry of the present generation, their fathers and their forebears, in the form of cultivated lands, orchards, and factories, were ruined by the thunderbolt of Mars.

I cannot, therefore, get very pessimistic over our situation when I compare how much better off we are than Europe, for example. In fact, I think we can feel greatly reassured in the soundness in general of American business, in that it has so far successfully withstood the strain of the tremendous shrinkage in values. With our elevators full of wheat, our warehouses crowded with cotton, and our shelves sagging with finished goods, are not our troubles due largely to a temporary failure of the usual channels of distribution to function? When goods do not move, credits become frozen, forcing many industries into a partial or complete shutdown, and that situation, by curtailing the production of new goods, eventually breaks up the congestion.

If I did not believe that American business had within itself the energy, the resourcefulness, the intelligence, and the power to work out successfully its inescapable part in restoring the economic stability of the world, I should be deeply concerned over the future of civilization. But, believing as I do, that American business can meet it, I have complete faith in the likelihood that ere long the clouds which now hang so heavily over the world of industry will have been completely dispelled, and Prosperity will again tread the paths of Opportunity.

EFFECT OF INCOME TAXES ON INVESTMENTS

BY W. N. DEAN*

THAT the expenses of government should be borne by those best able to pay is now a fairly well-established principle of taxation, and it is in accordance with this principle that our federal income tax laws and various state income tax laws have been drafted.

This form of taxation has frequently been referred to as "popular," but it is safe to say that it is popular only with those who do not have to pay it, and yet even the largest taxpayers do not seriously oppose the principle. The question arises, however, as to just how far this form of taxation should be carried. We have now had several years of high income and surtaxes on individual incomes, and it might be well to consider their effect on investments of surplus income or future capital before proceeding farther.

The normal federal income tax is now 8% on income in excess of \$4,000 plus the specific exemption. The surtaxes are effective on all income in excess of \$5,000 a year. The rate of surtax is:

1% on the first \$1,000 in excess of \$5,000
2% on the next 2,000
3% on the next 2,000

and increases 1% for each \$2,000 until an income of \$100,000 is reached.

From \$100,000 to \$150,000	surtax is	52%
" 150,000 "	200,000 "	" 56%
" 200,000 "	300,000 "	" 60%
" 300,000 "	500,000 "	" 63%
" 500,000 "	1,000,000 "	" 64%
Over \$1,000,000		" 65%

Whether or not the prospective investor as yet fully appreciates the effect of these taxes on his contemplated investment is a question. To the individual with a small income the matter is comparatively unimportant, but the individual with a fairly large income should thoroughly understand the effect of these taxes.

Because of the increasing surtax rate it is practically impossible to promulgate a general rule, but each individual knows to which class he belongs and will base his calculations on the rate applicable to that class. A further complication arises where states also impose an income tax. For example, a resident of New York State is subject to a state income tax of 1% on the first \$10,000 in excess of the specific exemption, 2% on the next \$40,000, and 3% on the balance of his income.

In calculating the effect of these taxes on the income from a new investment, a common error is to approximate the total tax and apply the average rate to the new income. Thus a resident of New York State, with an income of approximately \$150,000 a year, might calculate that his federal tax would total about \$60,000 and his state tax about \$4,000. A total tax of \$64,000 on an income of \$150,000 would be approximately 42½%, or, say, 43%. As a matter of fact, however, the tax on that portion of his income in excess of \$100,000 is 63%, made up of 8% normal income tax, 52% surtax, and 3% New York State tax. Since, presumably, the income from the new investment will be in addition to the existing income, it

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would be subject to the highest rate and not the general average.

The effect of the state tax is merely to make the individual subject to a higher rate of total tax on a smaller income. Thus a resident of New York State will pay a total tax of at least 5% on that part of his income which exceeds \$80,000, while an individual outside of New York State not subject to such a state tax will not be subject to a 50% tax on any part of his income until it exceeds \$86,000.

For our present purpose we will ignore the state tax and consider only the federal normal tax and surtax. In the case of an individual with an income in excess of \$86,000, the normal tax would be 8% and the surtax at least 42% on all amounts over \$86,000. Thus he would have to pay in taxes at least 50% of any additional income which he might receive from the reinvestment of any part of his income in taxable securities.

Assume that this individual pays \$40,000 for living expenses. He then has to pay on his \$86,000 income a total tax of about \$24,000, which leaves \$22,000 to reinvest. If invested in stock paying 8% annual dividends and subject to surtax, he would net only 4.64%, or \$1,020.80, annually. If invested in state or municipal bonds which are tax-exempt and paying 5½% he would receive net \$1,210. If invested in 8% bonds subject to tax he would receive net 4%, or \$880. It will be seen that the 8% stock yields a better return than the 8% taxable bond, but the 5½% non-taxable bond not only yields more but is also a safer investment.

This difference is accentuated as the amount of income increases and an individual with an annual income of over \$100,000 finds a larger net return from a 3½% tax-exempt Liberty bond than from an 8% taxable bond, and

the 8% stock is only 9/100% better than the 3¾% Liberty bond which is tax-exempt and much better security.

The above figures are based on the assumption that the price would in each case be par, but in all probability the Liberty bonds could be bought cheaper than the other securities and are, therefore, an even better investment than the above figures indicate. Certainly the 4¼% Liberty bonds up to the amount of the surtax exemptions are a good buy, yet they are selling at considerably less than par. For the man with an income in excess of \$86,000, the return is larger at par than the return on an 8% taxable bond at par.

As a further illustration, let us take the case of an individual who has an annual income of over \$100,000 and therefore is subject to 52% surtax and 8% normal tax on any additional income, omitting from the calculation the state tax on incomes.

Assume that this individual owns 4¼% Liberty bonds to the full amount of the surtax exemption, and assume further that there will be no change in the tax rate or in his taxable status (*i. e.*, his income will not exceed \$150,000 and put him in the next surtax class, nor will it drop below \$100,000) for the next 20 years at about which time the 4¼% Liberty bonds will mature. If he buys a \$1,000 Liberty bond, paying 4¼% at about 89, he will receive annually \$42.50 on his investment of \$890, or about 4¾%. This will be subject to surtax at 52% leaving him net 48% of 4¾%, or 2.28%, on his money. In addition he will receive at maturity, 20 years hence, the difference between the purchase price of 89 and the par of 100, or about 12.4% on the purchase price. As 12.4% over 20 years is equivalent to .62% per annum, this being a profit for the purposes of taxation, he will

have to pay 60% in taxes, leaving net 40% of .62%, or .248%. Adding this to the 2.28% received annually as interest, we have a total net return on the money invested of 2.528%, while a 6% mortgage would yield net only 2.4%.

In the comparisons so far cited, Liberty bonds have been chiefly considered, but all domestic, state and municipal bonds are fully exempt from federal income taxation. Most of these pay a higher rate than the Liberty bonds and, therefore, are even more favorable to the investor with a large income. To the individual with an income in excess of \$62,000 an 8% taxable bond would yield net 4.96%, while a 5% state or municipal tax-exempt bond would not only yield a higher net return but could probably be purchased at even a lower price. To the individual with a \$100,000 income, the 5% state or municipal bond will return more than a 10% stock or a 12% taxable bond, assuming the cost in each case to be par.

Further examples illustrating the effect of income taxation on investments could be cited indefinitely, but the result would vary with each different class of income and each security. Each case is a specific problem in itself.

The various factors to be considered are:

- Amount of annual income
- Exemptions on present income
- Exemptions on securities to be purchased
- Purchase price
- Interest rate
- Maturity
- Yield

Numerous other factors besides taxes are considered by the prospective investor, and yet of these investment factors taxes is one of the most important. Despite this fact the matter

of taxes is probably overlooked by a large number of investors. Many investors do not understand the rather complicated income tax and therefore do not know how to calculate its effect. Many do not think of taxes until the time of preparing the returns. Many had formed the habit of considering certain features of investments before the present high tax rates and do not yet fully realize that a new and important feature has been added.

On the other hand, it is undoubtedly true that the shrewder investors have given this matter some consideration and in many cases exact consideration, and of course the continuance of high income taxes will gradually increase this class. More and more free capital will be driven into tax-exempt investments, and this will seriously interfere with normal business financing. The Tax Committee of the National Industrial Conference Board recognized this tendency and in its tentative report dated October 6, 1920, states:

Productive industry must pay almost usurious rates for funds essential to its continued growth and existence. The railroads are in dire straits. Money has slowly but surely been driven out of the mortgage market and this condition has contributed largely to the housing problem in many communities.

The remedy which the Committee suggests is that the surtax on income reinvested be reduced to 20%. It states that this would tend to encourage thrift and "check the spirit of extravagance which is undermining our financial resources." To illustrate the effect of this proposed limitation the Committee gives the following example:

Let us assume that a taxpayer with an income of \$500,000 spends \$100,000 for living and personal expenses. The reduction of the surtax on the remaining \$400,000 is not

the only inducement which this proposal offers him to invest in taxables. If he does not take advantage of it his total normal and surtaxes under existing law would be approximately \$303,000, and when this is added to his personal expenses of \$100,000 (disregarding possible additional state or local taxes) he would have left not more than \$97,000 as the year's addition to his permanent capital. Invested in tax-free securities its annual yield would seldom exceed \$5,000. But if he takes advantage of this provision it reacts each succeeding year, both to his own advantage and to that of the government. His taxes would not exceed \$144,000, and he would have \$256,000, instead of \$97,000, as the year's addition to his capital. Invested in taxables at 7%, this would yield an annual income of \$21,920, and after deducting taxes of 28% (normal tax of 8% and maximum surtax of 20%), there would remain a net annual yield of \$15,782. In a word, the taxpayer could scarcely afford to pass up this privilege. By investing in taxables instead of non-taxables he would nearly treble the addition to his capital and more than treble the annual net increase in his income. At the same time the government will annually collect a tax ranging up to over \$4,000 on the income from the taxables, where it would not have received

one cent of tax if he had invested in non-taxables.

Taking the corporation as an investor in securities, an entirely different problem is presented because the excess profits tax on corporations takes the place of the surtax on individuals. The excess profits tax is based on the relation of income to invested capital with numerous restrictions on what may or may not be deducted from income or included in invested capital. Under certain conditions an investment in a tax-exempt bond might result in an increase of tax greater than the amount of the income from the investment, because of the deduction necessitated by the acquisition of an inadmissible asset. The excess profits tax, however, has been the subject of much adverse criticism and it now seems probable that it will soon be repealed.

There is little likelihood, however, that the income tax will be repealed, but it would seem essential that some revision of rates on income reinvested must be made to relieve the financial burden under which normal business is now struggling.

COMBINATION BONUS AND PRODUCTION CONTROL

BY CLINTON E. WOODS*

PART II—PRODUCTION CONTROL

THE first requirement in connection with a system for production control is the filling out and arranging of a set of Piece and Operation Key Cards (Form 1). One of these cards is to be written up for each piece that is to be manufactured, and filled in with the data as called for, similar to the illustration given. The captions on this card are almost self-explanatory and are exactly what they signify—a key to all of the information that is required for the processing of each individual piece, giving the drawing number, pattern number, etc., the kind and quantities of materials used, and the assembly or quantities that are required for any individual or for different units. The card also bears the numbers of the operations, the names of the operations, the standard time that it takes to do each operation, the department in which the operation is to be done, and the set-up number of the tools required (see Tool Set-up Key Card, Form 6), the number of machines that are operated by one man, and the machine number or symbol. The file for these cards must also contain a card with complete data for each piece that is bought as well as for each piece that is made in the factory.

To indicate how broad the use of this card is in controlling production, attention is called to the following:

1. It forms a list of pieces and parts to be manufactured which is to be used by the production division for the making of any

studies in connection with machine capacity, operations, standard times, and for the production division to make up its schedule from, as to number and name of operations required to process each specified part or to assemble each part.

2. It also furnishes information whereby requisitions for purchase can be made according to scheduled requirements; and at the same time, information as to what pattern is required to be sent to the foundry, etc.

3. The information in connection with materials should be just as complete as it is in connection with operations, as it is from these cards that all information is obtained from the specifications needed in connection with purchases as regards kind, quantity, and quality. This card is the master card from which all orders, instructions, and requisitions are issued to the factory.

There are two more cards of a similar nature which are to be used in order to get a complete list of all things that are required for the production of machines: an Assembly Key Card (Form 2) for all assemblies that are made complete in themselves and which go on to the units manufactured as an assembly, and an Erecting Key Card (Form 3). These forms give the necessary data: the operation number, the rotations of the operation, the standard time it takes to do the work, the department that the work is done in, the name of the pieces or assemblies, number of each, and the quantity required, for any particular assembly.

The filing of these cards is of considerable importance. Forms 2 and 3, Assembly Key Card and Erecting Key Card, should be filed, first, by Erecting Key Card and then by Assembly Key

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Card, and immediately back of this should be the Piece Key Cards. This is what is called "group filing," so that there is in some one place, a complete compilation of the information required in connection with each individual unit manufactured. It is recommended that another file be made of these cards, in which the entire number of pieces used is filed by the number of the piece. This, then, gives a cross-index by groups and by piece numbers.

II

When work is to be given to a workman in connection with the operation of any particular machine, there are three things he must be provided with:

1. The machine.
2. The material which is to be processed.
3. The tools which are to be used in processing the material.

It makes no difference what the job is, somebody must give this information before the workman can proceed. Usually the question of tools is left to the foreman to look after, but if possible the foreman should be helped in this by the use of a set of key cards.

The Tool Key Card shown in Form 4 is for individual tools which may or may not be used in conjunction with a set-up. These cards should be made out for every tool made, one copy of which should be kept in each tool room, and one copy in the production division. This applies only to tools made for special work, and not to standard drills, reamers, etc., nor the miscellaneous tools that are bought and are general in their use.

Form 5 is to be used in connection with all fixtures and dies that are specific in the nature of their design as required for some particular work, one copy of which should be kept in the production division, and one copy in each of the various tool rooms.

The most important of these three tool cards is the Tool Set-up Key Card (Form 6), which is a complete list of tools, fixtures, or dies that are required for the set-up for any particular operation. This card brings up at once the question of operations. It is considered that a standard operation is the processing done by a set-up of tools. Some study will have to be given to the classification of operations so as to line them up to this Tool Set-up Key Card. The importance of this cannot be overestimated, as this is a specification covering the tools required to do some particular kind of work. This is just as important as it is to specify the materials to be used, as this information is the means by which an instruction card to the workman, is made complete. (See Instruction Card, Form 12.)

III

With the foregoing data complete, everything is ready to consider the actual handling of production by a production division, and it should be assumed for purposes of illustration that the placing of an order for some definite piece is wanted; therefore, the production clerk will take the Piece and Operation Key Card and the Tool Set-up Key Card and proceed to fill out the following:

1. A Routing and Blue-print Envelope (Form 7) is required. This envelope must be filled out to show all of the operations that are to be performed, and if there are three operations, for instance, done in one department, it will show the routing of the work of this department and the operations done there. The date the work is to be started should be given and also the date it is to be finished together with the number and names of the operations to be performed. All of this data is to be filled in in the production de-

partment and must be made out in duplicate. The original will go directly to the general stores, where it will start with the material, thence to the department doing the first operation, and will travel with the work at all times and be properly O K'd by inspectors to each operation in collection. It will then be delivered to part stores or assembly stores with the pieces when the production order is completed, and will there be signed by the stores-keeper and sent directly to the production department.

The duplicate envelope will be filed in the production department. As fast as instruction cards come in the operations will be checked off on the outside of the duplicate envelope, and the instruction card on which are given the time and the value of the time will be filed inside the envelope. Thus, when the production order for any particular piece is finished, to get the labor cost of it will simply require the adding up of these instruction cards. The duplicate copy of the Material Requisition will also be filed in this envelope, which will thus bring together the labor and material costs for doing the work.

The rule that orders once started should never be split except upon extreme emergency should be rigidly enforced. Occasions will arise when for special reasons it may be necessary to split orders to get certain work done. When such is the case a red "Rush" envelope should be used which shows the piece number on which the work is being done, the order number of which the quantity split is a part, and particularly must it show at what operation it was taken, together with the date, by whom it was taken, and for what reason. The balance of the operating in routing on this envelope must be taken from the original envelope (Form 7), thus enabling the split order to be

carried through to completion as a part of the original order. This rush envelope will follow the same course as the regular envelope through the parts stores and production department and is identical with Form 7, but red in color.

2. Simultaneously with the making out of Form 7, a Requisition Delivery Ticket (Form 8) must be made out, on which must be specified the material by kinds, quantities, and dimensions as shown on the illustration. This form is made out in duplicate, one copy of which goes to the first operation where the material is to be drawn, the other copy of which goes with the envelope immediately to the stores-keeper. This gives the stores-keeper an opportunity to see what demand is going to be made for material, as it specifies the date the material must be delivered so that when the original requisition is presented to the stores-keeper there should be no excuse for his not having the materials on hand. When the original requisition comes in, the material will be delivered by the stores-keeper to the department specified, the original requisition will be credited in the stores department records and immediately forwarded to the accounting department. The duplicate of the requisition held by the stores-keeper will be sent out with the work, receipted, returned to the stores-keeper, who will price it and send it to the order department, where it will be put in the Route and Blue-print Envelope (Form 7) and held there until the order is completed. It will be noted that Form 8 is a new type of what is ordinarily known as a "General Stores Requisition," and answers not only for a charge but for a credit ticket as well, the upper left-hand corner always showing the "Credit" and to what the material called for on the card is to be applied, while the right-hand side

Piece No. _____ Operation _____ Drawing No. _____ Issue No. _____		PRODUCTION DIVISION FIXTURE AND DIE KEY CARD THE BULLARD MACHINE TOOL CO. Date _____		Symbol _____ For Setup No. _____ <div style="text-align: center;">ITEM</div>	
Pattern No.	Flesh No.	Kind of Machine used on	Pieces per Hour	Salvaged From	Salvaged To
General Description _____					
Superseded _____		Superseded By _____		Approved _____	

FORM 5—FIXTURE AND DIE KEY CARD

Piece No. _____ Operation _____ Drawing No. _____ Issue No. _____		PRODUCTION DIVISION TOOL SET-UP KEY CARD THE BULLARD MACHINE TOOL CO. Date _____		Set-Up No. _____ Piece Name _____ Kind of Machine Used _____	
Surface Feet Per Minutes			Pieces Completed		
Stock	Thread	Drill	Per Hour	Per 8 Hours	
SYMBOL	Drawing Issue	Name of Tool, Fixture or Die	Quantity	No. Pieces Per Grind	No. Grinds Per Tool
Superseded _____		Superseded By _____		Approved _____	

FORM 6—SET-UP KEY CARD

under "Charge" shows the room, department, or account number that the materials are to be charged to. Therefore, this ticket can be used either as a debit or credit requisition for any and all materials, doing away with what is ordinarily known as the "Credit Memorandum Slip."

3. Assemble Material Requisition (Form 9) has been provided for assembly purposes, and will be made out by the production department covering the necessary information for the issue of parts from stores. This requisition with the blue-print envelope will be delivered to the parts stores, while a duplicate will be sent to the department which is to perform the work, which will supply them with the date to start. The department will then send its requisitions to the parts stores, allowing them time to fill the same. The parts will be sent with the envelope to the Assembling Department. In the event that the stores is not able to supply all the parts as called for on the requisition, it fills in the date and what parts have been delivered. The completed requisition, will be turned over to the stores record clerk, who will post the items on the stores record, fill in the unit price, extend amounts and send the copy to the Cost Department.

When the work in the assembling department is completed, it will be turned into stores with the envelope, which will be checked by the stores-keeper. He will fill in the date received and quantity and O K it. The envelope will then be sent to the production department as their signal that the order has been closed. They will send daily to the cost department the order numbers that have been closed.

IV

At the same time Form 7 and Form 8 are made out Instruction Card (Form

10) is made out, one card for each operation that is to be done on the piece as called for on the piece and operation key card. Each instruction card is made out in triplicate, one copy to be used by the workman as an instruction card for him to do the work, one copy to go on to the order board or into the order file of work ahead in the department where the work is to be done, and the third copy to be sent immediately to the pay-roll department.

When the card calling for any particular operation is given to a workman, the blue copy that goes to the order board is taken from the work ahead file at the timing station in the factory where the work is done and filled in with the man's name and number. At the same time the other two copies are filled in with the man's name and number, one of which goes to the workman, and the other to the pay-roll department. By handling these instruction cards in this way, a definite control over each and every piece and operation that the factory is required to do is obtained. Inasmuch as this ticket calls for information as to the date to start the work and the date the work is to be finished, when it is taken from the work ahead box, it must show the time the work was started. The inspector's date will show the day that it was finished, thus checking any discrepancies as between what should have been done and what actually was done in connection with the time period.

Simultaneously with the issuing and timing of an instruction card for a workman, a Daily Time Ticket (Form 11) is made out in duplicate covering the instruction card. This daily time ticket is posted to the back of the instruction card on the order board, and then one copy of it is forwarded to the pay-roll department, where it is posted on the same card each day until

the work called for by the instruction card is done. The other is sent to the production department, these tickets going each morning to these departments for the day previous.

All the time periods in which work must be done will be given by the production division, and will be related to whatever the scheduled requirements are for processing the work in

the factory. As soon as an operation is completed, the original and duplicate instruction cards given to the workman are to be timed out. One is O K'd by the inspector and sent to the production division and checked off on the copy of the Routing and Blue-print Envelope. The other card is sent to the accounting department, where it will be checked up with their copy of

THE BILTON MACHINE TOOL CO.

Routing and Blue Print Envelope

Date to Start _____ Date to Finish _____

KEEP ENVELOPE AND CONTENTS WITH WORK

Order No.

762

Class No.

Piece No.

0311

Material Cast IronQuantity Started 25Name of Piece Side RailDrawing 17658 - 13980

Size _____

DATE TO FINISH	DONE IN DEP. NO.	OPERATIONS		REJECTED		INSPECTORS	
		NO.	NAME	SCRAP	REPAIRS	DATE	O K
	27	1	Planing 1st operation	0	0	11/15 JD ^v	
	27	2	Planing 2nd operation	0	0	11/16 JD ^v	
	28	3	Horiz Boring	1	0	11/20 WB ^v	
		4	Drill on 2 clamps				
	29		(see blue print)	0	0	11/24 WB ^v	
		5	Drill C' bore and				
	30		tap 3 holes	0	0	11/28 FS ^v	
	31	6	Scraping - complete	0	0	12/1 FS	

For Stock Room No. _____ No. Received _____ Date _____

NOTE:- Quantity received must be entered on Stores Record,
the Envelope must be sent to Production Division.

Storekeeper

the instruction card on which have been placed time records for bonus purposes, etc. By handling these instruction cards in this way the required data are furnished by the production division. The time periods are furnished by the production division and the timing stations throughout the factory for issuing the work should be under the control of this division. The return of the instruction card, therefore, to the central office of the production division makes a complete check-up on the conditions of the work in the factory daily and gives a complete control of production.

There is provided in connection with the instruction card and the daily time ticket, space so that the Bishop clock can be used if desired, but any other time clock method can be used.

V

The final disposition of the foregoing forms is as follows:

As soon as Form 7 with the envelope comes back to the production division from the stores-keeper, it is checked off on the duplicate copy which has been kept in the division and the envelope is then destroyed. The duplicate, showing that it has been checked, is put in a permanent file for future reference. The original copy of the requisition, after being entered in the accounting department, is filed by job, piece, or account number and held for a period not to exceed three months, after which it is to be destroyed. The same thing applies to the duplicate requisition which is held by the order department. What has been said of the requisition applies whether it is used as a debit or credit memorandum.

In connection with a bonus system the tickets should be handled as follows:

As fast as the daily time tickets are

made out by the time clerk in the factory, they should first be entered on his copy of the instruction card on the order board and then forwarded to the accounting or pay-roll department, where they will be entered on the copy of the instruction card held there for pay-roll purposes. In this way all of the time for any particular operations will be gathered together on one card in two different places, which makes a check on cost. The order cost department will close out all productive cost, but the regular accounting cost department will use these same tickets for making departmental distributions of labor and material so as to determine departmental overheads after all distributions are made. These instruction cards and daily time tickets should be held for a period of sixty or ninety days before being destroyed.

Up to the present moment the whole development has been along the lines of using a pay-plus system in accordance with pay-plus plan No. 2. The whole method of procedure is exactly the same in using pay-plus plan No. 1 with the exception that a different instruction card and a different daily time ticket will be required, as per Forms 12 and 13. This gives the captions necessary to work out the standard time for this basis. With this and the daily time ticket, which is used in posting to the back of Form 12, the entire system given in this article can be operated under either plan desired.

VI

Manufacturing Schedule (Form 14) is in reality a schedule of sales requirements; that is, it indicates the deliveries which a factory will undertake to make to the sales department of so many machines or units daily, weekly, or monthly, according to the product manufactured. These are generally

typewritten sheets. These Master or Manufacturing Schedules must be numbered in rotation and a sheet made out for each different size of machine or unit manufactured. The sheets should be O K'd by the executives of the company.

Upon the authorization of the Manufacturing Schedule, it then becomes necessary for the production engineer to lay out a schedule for each different part that is to be required for complete machines. This is illustrated on Form 15. If machines are to be assembled during the week of January 1, it is necessary to have parts coming ahead for these machines perhaps two or three weeks in advance of the commencement of erecting work. Therefore, for a machine to be assembled by January 1, the first parts should be finished the second week in November. In order to have the parts finished the second week in November, it will be necessary that work be started on the first opera-

tions perhaps fifteen days in advance of the week ending November 15. This time lag as between the first and last operation for the completing of the piece will be controlled all together by standard times, as will also the time lag between the commencement of erection work and the final completion of a machine.

In addition to these schedules, a schedule for the purchase of material must also be provided as exhibited on Form 16. Therefore if it is necessary to start operations on a given piece by November 10, it is absolutely necessary that the material be on hand with which to do the work. One of the things to do after a schedule is laid out is to get a check on materials on hand, and ascertain beyond all question of a doubt that the market can supply materials in time to maintain the schedule. Nothing is more disastrous or will break a shop up more completely in its operations and in its costs, than

CREDIT										REQUISITION - DELIVERY TICKET				B 51459
TO		CLASS		QUANTITY DELIVERED	UNIT	PRICE		AMOUNT						
CODE														
USE SEPARATE REQUISITION FOR EACH ITEM.		BLDG	FLOOR	BAY	ALISE	BIN								
QUANTITY WANTED		CAT. NO. OR SIZE		POINT OF DELIVERY										
DESCRIPTION OF ARTICLE										DATE		CHARGE		
												RDOM		
												DEPT		
												ORDER		
												ACCOUNT		
												FOREMAN'S SIGNATURE		
RECEIVED AND CHECKED BY				CREDIT ENTERED BY				COST CHARGE MADE BY						
SIGNATURE		DATE		SIGNATURE		DATE		SIGNATURE		DATE				
<p>ORIGINAL: - THIS COPY IS TO BE USED AS A DELIVERY TICKET WHEN FORWARDING ARTICLES TO MAKER OF REQUISITION, MUST BE RECEIPTED AND FORWARDED TO REQUISITION DEPARTMENT AND FROM THERE TO COST DEPARTMENT.</p>														

FORM 8—REQUISITION—DELIVERY TICKET

What has been said in connection with manufacture, also applies to

[illegible]

FORM 9—REQUISITION FOR ASSEMBLY PURPOSES

Dept. No. 27		INSTRUCTION CARD				Date to Start <u>11/1</u>	
Name George Smith		No. 728		Date to Finish <u>11/26</u>		Contract No.	
Quantity Started 25	Order No. 762	Part No. 0311	Oper. No. 1	18			
Name of Part Side Rail			No. Pieces 25	Machine No. 100			
Operation Planing 1st operation			Unit St'd Time 6.2	No. of Machines 1			
			Total St'd Time 155	Hour Rate 40			
			Actual Time 94.5	Wages 37.80			
Tool Set up No. 0 Speed 40 Feed 1/16			Time Saved 60.5	Bonus 14.74			
Cut .25 Lubricant Dry			% Saved 39	Total Pay 52.54			
No. Rec. 25	Scrap 0	Repairs 0	Good Pieces 25	Date 11/15	O. K. J.D.		

Dept. No. 31		INSTRUCTION CARD				Date to Start <u>11/23</u>	
Name Wm. Ford		No. 323		Date to Finish <u>12/17</u>		Contract No.	
Quantity Started 6	Order No. 762	Part No. 0311	Oper. No. 6	33			
Name of Part Side Rail			No. Pieces 6	Machine No.			
Operation Scraping			Unit St'd Time 14.66	No. of Machines			
			Total St'd Time 88	Hour Rate 44			
			Actual Time 56	Wages 24.64			
Tool Set up No. Speed Feed			Time Saved 32	Bonus 8.97			
Cut Lubricant			% Saved 36.4	Total Pay 33.61			
No. Rec. 6	Scrap 0	Repairs 0	Good Pieces 6	Date 12/1	O. K. F.B.		

materials. There may be several pieces required which are made from identically the same kind of stock or material, in which case one schedule sheet only is required for a Material Purchasing Schedule, the time-period deliveries being according to the Piece Production Schedule time-periods for starting the work.

VII

The Manufacturing Schedule (Form 14) is made out by the executives of the company and given, as before stated, to the production division to be broken up into schedules for each piece to be made. As fast as machines are made from week to week, they are entered under the "Made" column showing what was made for each particular unit and also the accumulative total. Then a deduction is made to show how many days ahead or behind schedule completed machines are. This is posted weekly and laid before the executives of the company.

These schedules (Form 15), after being made out, are put into loose-leaf

binders by machine or unit sizes and classified by divisions and pieces by the same methods that the Piece and Operation Key Cards are, this indexing being, of course, for ready reference. Every piece that is manufactured must pass through the parts store room for record. If this is not done physically, it is done by having the Routing and Blue-print Envelope (Form 7), go to the stockroom to be recorded and receipted. This envelope is then sent directly to the production division and the quantities shown as going into stores on this envelope are at once entered on the schedule sheet. In this way first-hand data are obtained as to what has been made for the week. This is immediately put into the cumulative total and then the days ahead or behind schedule are given by deduction.

The posting for the Material Purchasing Schedule (Form 16) is obtained from the receiving department where a copy of each purchase order is on file. As these purchase orders, numbers, dates, and quantity orders are given

DAILY TIME TICKET				
DEPT. NO.	EMP. NAME	NO.		DATE
QUANTITY STARTED	ORDER NO.	PART NO.	OPER. NO.	CON. NO.
NAME OF PART				ACC. NO.
				FOR DEPT. NO.
NUMBER PIECES	REGULAR HOURS	RATE PER HOUR	AMOUNT	
	OVER HOURS	RATE PER HOUR	AMOUNT	
	TOTAL HOURS		TOTAL AMOUNT	

FORM 11—DAILY TIME TICKET IN DUPLICATE

DEPT. NO. FOR DEPT.		DAILY TIME TICKET				DATE	
NAME		NO.					
ACCOUNT NUMBER	ORDER NUMBER	PIECE NUMBER	OPER. NUMBER		CLASS NUMBERS		
NAME OF PIECE			CONTRACT NO.				
DES. OF OPERATION			NO. OF MACHINES				
			MACHINE NUMBER				
			REPLACE DEFECT				
NO. PIECES	TIME STARTED	REGULAR HOURS	RATE	AMOUNT			
	TIME STOPPED	OVER HOURS	RATE	AMOUNT			
		TOTAL HOURS		TOTAL AMOUNT			

DEPT. No.		INSTRUCTION CARD						DATE STARTED	
NAME		No.							
QUANTITY STARTED	ORDER NUMBER	PIECE NUMBER	OPER. NUMBER		CLASS NUMBER				
NAME OF PIECE			CONTRACT No.						
DIS. OF OPERATION			No. OF MCH.		MCH. No.				
			DATE TO START		DATE TO FINISH				
			TIME STARTED		TIME FINISHED				
TOOL SET UP No.		SPEED	FEED		AC'T TIME		ST'D TIME		
CUT		LUBRICANT			WAGES		BONUS		
No. REC.	SCRAP	REPAIRS	GOOD PIECES	DATE	O. K.	EFFY.		TOTAL PAY	

FORMS 12 AND 13—NEEDED BY THE SYSTEM

on the schedule as fast as any goods are received, a receiving notice is immediately made out and forwarded to the purchasing agent who will have the quantities posted under "Received" and by a deduction will then be able to tell how many days ahead or behind delivery requirements all materials have been.

VIII

In order that the handling of all the foregoing may be made perfectly clear to everyone who is in any way responsible for handling or using the forms illustrated, and in order to make perfectly clear the various departments affected by the production control system, a chart, Production Control Chart (Form 17) has been drawn giving the form numbers and names that are required and their movements from one department to another. For instance, all of the standard data cards from one to six, inclusive, should be made up in the time study department, and a complete set of each kept in the scheduling and planning and order sections of the production division.

In other words, the time study department should prepare standard data from which to make schedules. The schedule and planning sections should lay out all of the schedules that are required for manufacture from the data furnished by the cards made up in the time study department.

The issuing of these schedules then transfers the control of everything to the order department, and the movement of these forms can thus easily be traced from this department to their final disposition. All of this is easily done by following the lines with numbers on same, as connected with any form numbers.

The various departments as shown on this chart must be identically the same as shown on the organization

chart; that is, the time-keeping, time-studying, scheduling, planning, order department, and the parts stores, all come under the production division.

The manufacturing departments, shown from the cutting-off department to the lathe department, are only examples of how the work is handled and controlled through departments which do the processing of the materials.

IX

The Parts Stores Record Sheet (Form 18) is to parts stores exactly what the Form General Stores Record Sheet is to general stores; that is, it is a record of all parts and pieces finished in the factory.

When any finished pieces or parts are received in stores from the work in progress, they will always be accompanied by the Blue-print and Routing Envelope or a special routing tag copied from this envelope.

Whatever the form of this envelope, whether regular or special, the clerk will enter on it the actual count of goods received, the date, and will sign his name, then turn it over to the stores record clerk who will immediately post to this record sheet the quantity specified, together with the order number, etc., under which it has been made.

It frequently occurs that material of this character will be received in stores as only a part of some production order. This will always be indicated by the special blue-print envelope.

In such cases, the entry for these pieces must be made in the column captioned "Received on Unfinished Orders," for the reason that goods coming in in instalments in this way, have not as yet been costed out and consequently must be held in this column until the cost is received, which will be upon the completion of the production order.

The deliveries on these pieces, however, are to be billed out at the "Last Cost Price Record" shown on this sheet.

When material on uncompleted orders is entered in the column "Received

on Unfinished Orders," the quantity is also added to the balance in column headed "Balance on Unfinished Orders" given on the outside. It may be that several instalments of finished

MANUFACTURING ORDER										ISSUE NO. _____	
MFG. ORDER NO. _____				RATE PER DAY _____		SCHEDULE BEGINS _____					
MODEL _____				NO. DAYS RUN _____		SCHEDULE ENDS _____					
QUANTITY TO SCHEDULE _____											
WEEK ENDING	DAY	NO. DAYS IN WEEK	CUM.	SCHEDULE DAILY	FOR WEEK	CUM. TOTAL	MADE FOR WEEK	CUM. TOTAL	DAYS AHEAD	BEHIND	
MAY	6	6	6								
	13	6	12								
	20	6	18								
	27	6	24								
JUNE	3	5	29								
	10	6	35								
	17	6	41								
	24	6	47								
JULY	1	6	53								
	8	5	58								
	15	6	64								
	22	6	70								
	29	6	76								
AUGUST	5	6	82								
	12	6	88								
	19	6	94								
	26	6	100								
SEPTEMBER	2	6	106								
	9	5	111								
	16	6	117								
	23	6	123								
	30	6	129								
OCTOBER	7	6	135								
	14	6	141								
	21	6	147								
	28	6	153								
NOVEMBER	4	6	159								
	11	6	165								
	18	6	171								
	25	5	176								
DECEMBER	2	6	182								
	9	6	188								
	16	6	194								
	23	6	200								
	30	5	205								

parts or units will be received into finished stores before the entire order is completed, but as soon as the total order and cost of the order are received, the total quantity made on the order is extended in the column "Quantity on Finished Orders," and the cost price entered as above.

When the stores record clerk receives a requisition calling for parts stores and these have to be delivered, he will enter on the "Given Out" side, the date of requisition, requisition, and order number for which the material is to be used, together with the quantity. The amount is then extended to "Balance in Parts Stores" and the inventory value is carried out at once.

In the event of its being necessary to give out parts stores that have been received on an unfinished order, the requisition and order number, together

with the quantity, are entered in exactly the same manner as above, and the quantity is deducted from "Balance on Unfinished Orders," as there is no balance in parts stores; for, as stated above, although the goods may be received into parts stores department in instalments from some production order, they cannot become parts stores as a matter of record, but still remain "work in progress" until the costs are ascertained.

When costs of any parts which are carried on "Balance on Unfinished Orders" are received, the quantity is then transferred to "Balance in Parts Stores," together with unit price, total values, etc.

X

The Record of Production, Betterment, and Repair Orders (Form 19)

PIECE PRODUCTION SCHEDULE												
THE BILTON MACHINE TOOL CO.												
Part Name _____						Part No. _____						
Total Requirements _____												
On Hand _____						Based On Schedule No. _____						
On Purchase Order _____						Rate Per Day _____		Schedule Begins _____				
Balance to Schedule _____						No. Days Run _____		Schedule Ends _____				
TIME PERIODS				SCHEDULES								
Week Ending		No. Days		Schedule		Production Orders Issued			Made		Days	
Month	Date	In Week	Cum.	For Week	Cum Total	No.	Date	Quantity	For Week	Cum Total	Ahead	Behind
January	5	5	6									
	12	6	11									
	19	6	17									
	26	6	23									
February	2	6	29									
	9	6	35									
	16	6	41									
	23	6	46									
March	2	6	52									
	9	6	58									
	16	6	64									
December	23	6	277									
	30	6	282									
	7	6	288									
	14	6	294									
	21	6	300									
	28	6	305									

FORM 15—PIECE PRODUCTION SCHEDULE

MATERIAL PURCHASING SCHEDULE THE BILTON MACHINE TOOL CO.													
Part Name _____						Part No. _____							
Total Requirements _____						Name of Material _____							
On Hand _____						Based on Schedule No. _____							
On Purchase Order _____						Delivery Begins _____							
Balance to Schedule _____						Delivery Ends _____							
TIME PERIODS				SCHEDULES									
Week Ending		No Days		Schedule		Purchase Orders Issued			Received		Days		
Month	Date	1st Week	Cnm.	For Week	Cum Total	No.	Date	Quantity	For Week	Cum Total	Ahead	Behind	
January	5	5	8										
	12	6	11										
	19	6	17										
	26	6	23										
February	2	6	29										
	9	6	36										
	16	6	41										
	23	6	48										
March	2	6	52										
	9	6	58										
December	23	6	277										
	30	5	282										
	7	6	288										
	14	6	294										
	21	6	300										
	28	5	305										

FORM 16—MATERIAL PURCHASING SCHEDULE

shows in just what way record is kept of production orders. The column footings show, for instance, the amount with which general stores is to be credited and the amount with which labor including bonus is to be credited. Productive hours are given, the overhead amounts, total cost amounts, etc., and then the total charge to parts stores. From all of this it can be seen that this sheet is designed to serve several purposes and really constitutes what might be termed a "Factory Ledger of Production," inasmuch as it forms a credit to all productive labor, material, and overhead, and a charge to all parts stores, finished stores, betterments, and reserves.

Furthermore, this sheet closes out all finished stores, gives the total cost and unit cost of each order, and separates all unfinished work into work in

progress. Therefore, the totals of materials, labor, overhead, and work in progress, as shown on this sheet, can be journalized directly into controlling accounts. Also, the totals of parts stores, betterments, and the repairs to be charged to reserves are taken from these sheets and journalized directly into the controlling inventory and reserve accounts and these totals should be shown on the factory production sheet, in the controlling accounts.

In other words, this is a grand totaling sheet for all factory activities outside of overhead. While it may present some work in its compilation and arrangement, it should not be forgotten that this is one of the greatest instruments for auditing purposes that has as yet been designed, as there is no difficulty whatsoever for an auditor to check up everything in connection

with production, betterment, and reserves by simply going over these sheets. This was one of the original causes of its design.

The totals for each order posted on this sheet are obtained from the instruction cards contained in the copy of the routing envelope and the sum total of all orders of the various kinds is taken directly from this sheet into the controlling accounts, leaving a perfectly clear record from beginning to end for all auditing purposes.

Furthermore, this sheet gives the production division a complete check-up at the end of each month in summarized form. In the "Previous Value of Work in Progress" column, data are given by means of which any production that may be delayed or behind schedule can be speeded up.

In other words, the production division has daily and weekly information as to progress. A monthly recapitulation of this sheet is provided from which any and all adjustments required on schedules can be made. The importance of this should not be overlooked.

It is recommended that three separate sets of sheets be used; one for production, one for betterments, and one for repairs, the distribution to betterments and repairs simply being the account number according to the classification of assets and reserves, the distribution to production being the production, assembly, and erecting order numbers.

The Comparative Piece Cost Card (Form 20) has been prepared for the purpose of making a comparison of the piece or order cost on different pieces or orders made. In other words, each order closed out on "Record of Production and Repair Orders," is to be drawn off on this card according to each individual piece number. This makes possible a comparison of the material,

labor, and overhead cost of each piece, as each successive production order is put through the factory, or as each assembly order is given.

In addition thereto, the card shows the productive hours and the average labor cost per hour.

An analysis of the total number of pieces used on any one machine will give the total cost of any machine, that is to say, from the total cost column of each piece the total number of pieces of the machine can be obtained by simply using an adding machine and totaling them all together.

This, however, is not a true cost of the machine, as the true cost of the machine will be from productive orders for final assembly work. That is, for an order to assemble twenty-five machines, the piece and assemblies will be drawn from stock and their cost-price charged to such an assembly order. This would show on "Record of Production, Betterment, and Repair Orders" the same as pieces.

It is recommended that a separate sheet be used for all assembly orders; that is to say, an assembly order will consist of all the labor and requisitions for pieces or assemblies.

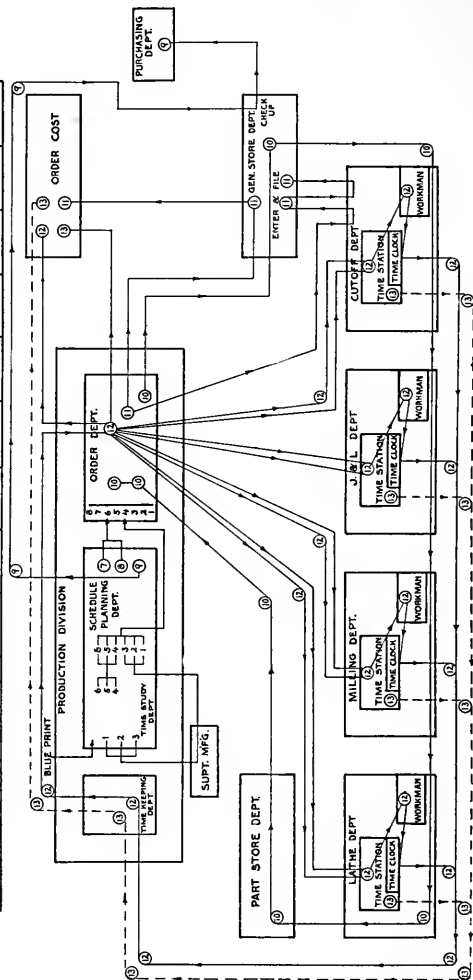
XI

In order to operate the foregoing system of production control, it is necessary to have a planning division divided into about four departments, the first of which is an "Order Department." This is needed in order that a control and follow-up or chasing system may be applied to all orders that are put into the factory. These orders must be dispatched in all instances from one place. This is so broad in its scope that it applies to production orders, betterment orders, and all repair orders which constitute repairs in any way to fixed assets. All repair

PRODUCTION CONTROL CHART
of
THE BILTON MACHINE TOOL CO.
BRIDGEPORT, CONN.

FORM NUMBER AND NAMES

1	2	3	4	5	6	7	8	9	10	11	12	13
PIECE	ASSEMBLY MAIN ASSEM	TOOL SET UP	FIXTURE	MTG	PIECE	SCHEDULE	SCHEDULE	ENVELOPE	STORE REQ	INSTRUCTION	DAILY	TIME TICKET
DUPLICATE	DUPLICATE	DUPLICATE	TRIPPLICATE	TRIPPLICATE	TRIPPLICATE	DUPLICATE	DUPLICATE	SINGLE	DUPLICATE	TRIPPLICATE	TRIPPLICATE	SINGLE



Form 17—Production Control Chart Showing Route of All Forms

Betterment and Repair Orders AND MATERIAL										FOR MONTH <u>November</u> 1920			
										CHARGES			
TOTAL LABOR	Product No	Hours	Rate	Overhead Amount	TOTAL COST	PIECE COST	Unfinished Work In Progress	ALL FINISHED ORDERS TO BE ENTERED HERE					
								Charge to Part Stores	Charge to Finished Store	Charge to Replacements	Repairs Charged Replacements	ACCOUNT NO.	MISC.
256.91	504.25	130	385.98	2,250.39	90.01		2,250.39						
15	23	130	19.50			56.50							
11.29	30.25	130	14.67			42.58							
8.02	13	130	10.43			54.87							
4.90	10.25	130	6.57			16.17							
1.91	4.25	130	2.48			7.39							
2.26	4.25	130	2.94			7.70							
340.29	589.25	130	442.57	2,250.39		185.21	2,250.39						

TION BETTERMENT AND REPAIR ORDERS

be made to determine the location of such stations and to see that a sufficient number be installed to cover the work done on various floors. Otherwise employees will waste time running between their work and the timing stations.

These timing stations not only embrace the cost recording apparatus of every kind, but also the planning or instruction ticket board. Whatever may be the nature of the job board at the timing station, it should provide for jobs ahead, jobs at work, and jobs finished. It should be arranged in such a way that each pocket on the planning board represents an employee and not a machine. There should be provided as an auxiliary a separate board with checks on it covering the number of machines controlled by the timing station. Each time a machine is given a job the check for this machine should be connected up to the job pocket. This will then always show machines at work, machines idle, and what the machines at work are doing.

In order to make this method of production control perfectly simple

and independent of tabulating machine methods, illustrations are made up showing six operations on a piece on Form 1. This shows also the data it is necessary to compile in connection with standard time, feed speeds, cuts, lubricants, etc., in order to make the system workable. The first use in connection with Form 1 is in filling out Form 7, the same operations being shown on this envelope as on the Piece and Operation Key Card, together with the routing for same by departments. Into this envelope then, will go the Requisition Delivery Ticket (Form 8) together with the Instruction Cards (Form 10). This will make up a complete order for any particular set-up on which it is desired to get individual costs and control. Just how these forms are worked out is illustrated on Form 10, showing Planning-1st Operation, and Form 10, Scraping-6th Operation, which is the first and last operation required on the side rail, each operation having a set of instruction cards made out exactly the same and the time from the daily time tickets being posted on the back of

INDUSTRIAL DEMOCRACY VS. THE BETTER BOSS

BY JAMES COOPER LAWRENCE *

A YEAR or so ago the road to industrial peace and production was clearly illumined in the mind of many would-be counselors of big businesses. The path of salvation led straight to the temple of industrial democracy. Today many of those responsible for the human element in our business, who once were busiest in shepherding the human element on its way to the temple, are hunting for jobs back to the 1896 basis. The pendulum has swung from one set of unusual business conditions to another set just as unusual. While we are going through a reaction not so very different from that experienced by a man waking from a nightmare to find his house on fire, it is not an easy matter to reconcile the wavering hopes of the industrial democrat for peace with the hardening resolves of the industrial autocrat for profit. Yet the reconciling of these hopes and objectives must be accomplished if we are to have peace, production, and profit.

As we look back over the past year and the efforts of our sorely tried leaders to restore normal industrial conditions, inevitably they were vexed by the total depravity of human nature and sorely tried by the innate cussedness of their fellow-men. Hence it was natural for them to wonder if industrial legislatures and shop committees could not in some measure lead them out of the wilderness of discontent. It was also quite natural for the young radicals, until recently engaged in trying to make us efficient, to become experts in industrial de-

mocracy in almost less time than was required to brush their intellectual hair and polish up their tortoise-shell glasses.

We have been told that the present-day grievances of those of us who are compelled to toil for a living "are due in larger part to big business organization which has brought about what may be justly called 'absentee landlordism' in industry."¹ We have also been told that "the working man craves an actual voice in plant management to be had through industrial Senates and Houses of Representatives and Shop Committees." Industrial democracy has been proposed for absentee landlordism and as a means of gratifying the supposed desire of every man in shop or office for a voice in managing the business in which he works.

The management of an industry and the ownership of an industry are not necessarily one and the same thing. In many recent discussions on industrial democracy this point has not been made clear. As a matter of fact the majority of the employees in any factory want nothing whatever to do with the management of shop, office, or sales. On the other hand, it is quite natural for them to want to secure a part of the ownership of the business for themselves. A few capitalists have been astute enough to give their employees a purely theoretical voice in management as a substitute for the opportunity to acquire the ownership of blocks of common stock.

¹ Dr. Royal Meeker, U. S. Commissioner of Labor Statistics—"Employees Representation in Management of Industry,"—Papers of the Annual Meeting of the American Economic Association, March 1920.

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Others have given their men a fair chance to earn a share in the ownership of the business through the purchase of common stock on favorable terms. The most noteworthy example in this direction has been that afforded by Judge Gary. Others with his vision have pictured the day when a big business organization will no longer consist of employer and employees in the sense that these words are used today, but will be, instead, an aggregation of men each of whom, through the ownership of a share in the enterprise in which he works, is in business for himself. When that day comes the owners of the business are going to be prompted by enlightened selfishness to seek competent management for their capital regardless of their number or of whether their ownership is democratic in character.

In spite of the declaration that the panacea for our industrial ills is more democracy in management, no one as yet has gone so far as to suggest or experiment with any method remotely savoring of democracy. True democracy, if dictionaries and philosophers are to be trusted, rests upon the conviction that the voice of the people is the voice of God; that all men who are equally qualified should have equal opportunity to attain to any position of leadership; and that there should be, therefore, rotation in office, thus affording opportunity for many men of equal capacity to serve and lead their fellow-men.

The pure democracy of Athens produced a social system which ostracized its most capable leaders to make sure that their ability did not establish them too firmly in positions of power and authority. In a later day in our own country Andrew Jackson declared, "The essence of democracy is to pass around the jobs." Still more recently the same spirit found expres-

sion in the platform of a great political party which tried to bind its candidate for President to serve for but one term so that some other deserving patriot might have a chance to fill the office. At town meetings of small New England communities the purest form of democracy has occasionally been applied to local government, by putting the names of all male citizens in a hat and drawing lots in the form of a slip bearing a name for each office—from mayor and town justice to hog reeve.

While the advocates of constitutional government in industry have unquestionably a program and representatives of the voice of the people are sent to express its opinion about certain policies of management, industrial democracy does not provide for the passing around of positions of leadership in accordance with the basic democratic principle of rotation in office, and it makes no provision for the popular election of officers or the use of the initiative, referendum and recall. When we begin to scrutinize this program there would seem to be ground for questioning the term applied to it; for the reason that men whose lives have been spent in adjusting the fine balance that makes the wheels of industry go round come forward to declare that a program of active participation in management for all employees is not what employees want. The late Henry B. Endicott probably did more than any other man of his generation in settling industrial disputes and removing causes of unrest. In one of his last public utterances he said:

The worker does not want to participate in the management of the plants. He wants a fair deal in his individual job. He wants good working conditions, good wages, and a good home. He doesn't care two cents about anything else connected with the shops.

Putting the statement in a slightly different form, there are many of us whose working lives have been spent in shops and offices who do not want soviet government in industry. We do not seek a voice in the management of the plant. What we do want is leadership of the right kind.

We recognize in ourselves, and we believe we recognize in a lot of other folks, a natural craving for leadership. We remember how as a boy we willingly followed the natural leader of our gang. In high school and college our teams, fraternities, cliques, and clans all centered around individuals whose leadership the majority of us gladly followed. As grown men we willingly follow the leadership of those whom we consider better qualified than we are to show the way in political, religious, or social activities. This craving for leadership and its prompt acceptance when the right article appears is warp and woof of our industrial life as it is of our political, religious, and social life.

A certain wise capitalist who once bulked large in the industrial development of the Middle West, governed his financial policy by this rule: "I never will put my money in a one-man business; and I never will put my money in a business unless it has one man." Henry of Navarre some centuries ago wrested France from the thralldom of Spain because he knew how to build on the natural hankering of human and other gregarious animals for leadership. Sticking a white plume in his helmet he started the game of "Follow your Leader" and the people with emblem in hand followed him like a crowd of boys. White plumes and such emblematic frills and feathers are out of harmony with modern industrial conditions. But the longing for leadership is as insistent today as ever it was and is a

factor in management with which we must reckon. It may be that the remedy for the ills we attribute to absentee landlordism is not the creation of employee legislatures and debating societies but the selection of the right sort of men as managers—leaders who are accessible to the men under their charge.

Those who advocate mass action instead of individual leadership as the best means of securing fair treatment and good working conditions for all employees, apparently overlook the fact that the character of subordinate leadership which is in close touch with the workers reflects the character of the management which is inaccessible to them or remote from them. It is easier for one man with exceptional gifts as a leader to imbue his subordinates with definite ideals toward which they can work and to convince them that they are being given a square deal, than it is to find these ideals in the confused demands of the representatives of a group of shop workers. It is easy for such a man to convince them that what they believe to be an injustice only seems unjust because they do not know all the facts of the case.

It is often impossible for the inaccessible management to convince them of this fact. Furthermore, when the question of what is and what is not fair treatment is raised we must realize that the things in the shop which try the souls and exasperate the temper of men are largely matters that must be settled in the group or room where they originate. Circumstances and conditions alter cases. Often the trivialities which create friction or the economic forces that arouse discontent can no more be placated or remedied by plant legislature or committee than the problems of a juvenile court or the law of supply and demand can be settled or controlled

by the Supreme Court at Washington.

During the last decade or two, industrial organizations in this country have grown at a rate that has made it difficult to find and develop competent foremen fast enough to keep up with our industrial expansion. Men lacking every qualification of leadership have been placed in positions which represent to their subordinates the voice of authority. There is no arrogance to equal that of the unqualified man vested with a little authority, and there is no more prolific cause of discontent and rebellion against working conditions.

Today slackened production and curtailed distribution bring with them the opportunity of a generation. The chance is here for our industrial leaders to purge of their incompetent leadership the organizations they control. The merciless firing of all men from positions of authority who have not proved their ability to handle others can be accomplished today with incalculable gain to the present and future spirit of the working force. As industry revives and its pace quickens, those with vision will develop a host of recruits to stand beside the really capable subordinate leaders who are to be found somewhere in every plant and factory today. Then as their vision clears they will learn to place a new valuation on simple, old-fashioned leadership. Then many of the burdens that in the past have been borne by the planning and labor departments and production controls will slip down upon the shoulders of the foremen in the shop and managers in the field. Then the problem of securing fair treatment for all will become much simpler than it is today.

In presenting this argument it is

unnecessary to venture into the untested paths of theory. Since men first worked together industry has had its leaders, and the most successful leadership has always been based on ability, fairness, and consideration for others. Ever since business organizations have striven for a perpetual existence in corporate form, there has been a field for the sort of leadership that renews itself from the rank and file of the workers, without regard for relationship, stock holdings, or anything else except demonstrated ability to manage. The fact that such leadership has been found and can be found, prompts many of us to figure from pure selfishness that we can get the most out of a business if the problems of management are centered in the hands of the ablest men available for the jobs of leadership. We are perfectly willing to "let George do it" so long as we know that George with his ability and fairness can do more with and for us than we can do with and for ourselves. From the beginnings of organized industry men have realized, without any elaborate process of reasoning, that their capacity for work is their capital. To make the most of their capital, enlightened selfishness makes them willing to place it in the hands of the best managers to be found, just as most of us entrust our financial capital to the handling of skilled and trustworthy financiers with the expectation that such an arrangement will be mutually profitable. The age-old hunt for a better job has usually been a hunt for a better boss. All of which is only another way of saying that the golden rule rules in business as in all other spheres of human activity where there is peace and content.

THE MANUFACTURER'S MARKETING PROBLEM

BY PAUL WESLEY IVEY*

EXTENSIVE readjustments have been made of the factors in the system of distribution. These changes have frequently involved considerable disorder, amounting at times almost to chaos. The usual course of distribution has been from the manufacturer to the jobber, from him to the retailer, and finally from the retailer to the consumer. Thus each marketing function was differentiated and performed by an independent organization. Hence, when within recent years manufacturers, jobbers, and retailers attempted to take over each other's functions, disorder naturally resulted. Integration of marketing functions meant the elimination of some old types of middlemen and the combining of their functions under new organizations. The struggle for survival has made the period of transition a bitter one and confusing in its significance even to the parties directly concerned.

This readjustment was brought about by the transformation of a seller's market into a buyer's market, and in the transition advertising was destined to play an important role. When advertising became known as a marketing force, manufacturers attempted to use it as a device to eliminate the jobber, and in some cases the retailer. It was believed that a consumer demand could be created by advertising which would make possible a permanent, steady outlet for the goods and enable a cheaper distribution of them. This plan necessitated the building up of a sales organization which was

often a costly expansion, but the belief was prevalent that a cheaper selling expense would ultimately result.

II

While the change in relationship between demand and supply was the underlying cause of market readjustments with their resulting disorder of mechanism, the immediate reasons for integration are found in certain practices of market functionaries. Manufacturers allege that jobbers refuse to push their goods and that the goods of competitors are given preference. Manufacturers naturally desire to increase their production as much as possible in order to utilize to the fullest extent the capabilities of their plants, thereby reducing unit costs, but this desirable result cannot be attained because the larger production has no market, and the jobber refuses to create a market. This forces the manufacturer to create his own market by advertising. The result is that he goes into the jobbing business.

The manufacturer also accuses the jobber of putting out his own private brands in competition with the brands of his clients. This competition cuts down the market for the manufacturer's product. After the manufacturer has established a reputation for his goods, this reputation is endangered by substitute brands sold by the jobber, who controls the channels of trade to the retailer. Thus hampered on every side and out of touch with the markets, and dependent for distribution on jobbers who could not be

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depended upon to push their goods, manufacturers have revolted and gone over the heads of both jobber and retailer.

In most cases it has been necessary for the manufacturer to eliminate the retailer as well as the jobber because the retailer has been controlled more or less absolutely by the jobber. This control was largely owing to the fact that the jobber had made personal friends with the retailer through long years of personal solicitation through his salesmen. Moreover, the jobber in many cases had extended credit to the retailer until the latter often lived only by sufferance of the former. Because of fear and gratitude on the part of the retailer, the jobber was thus enabled to hold control of the most important outlet for the manufacturer's goods. These conditions of distribution finally became unbearable for manufacturers, and when relief appeared in the form of advertising it was eagerly turned to by the manufacturers as the solution of their marketing problem. It was now believed that, on the one hand, the jobber could be eliminated from the marketing system, or be forced to carry the goods because of retailer-demand, while, on the other hand, retailers would be coerced into handling the advertised goods by reason of consumer-demand. Unfortunately for the manufacturer, such an easy victory was not to be won.

III

As against these charges, the jobber on his side lays the blame for the present market disorder largely at the door of the manufacturer. He affirms that the manufacturer attempted to eliminate the jobber even before the latter put out his own private brands, and in retaliation for the manufacturer's entrance into the jobbing busi-

ness the jobber has gone into the manufacturing business or has assumed control of sources of supply. This entrance into manufacture has been necessary for the jobber, he says, because the manufacturer removed from him the handling of the manufacturer's brand, leaving the jobber with a retailer market but nothing of a specified character to satisfy its demand. In order to keep his organization intact, therefore, the jobber has been obliged to produce or procure his own brands, or to contract with others to produce the goods on which to put his label.

The jobber finds fault also with the retailer for the present market disorder, affirming that as the unit of retailing has increased in size there has been a greater tendency for retailers to go direct to manufacturers for goods on which they could secure the jobber's quantity discount. Jobbers claim this "cream of the business" for their own, and see no justification for the manufacturer's selling over their heads to the large retail stores. The manufacturer, on the other hand, replies that he is justified in selling to any store which is willing to buy in large quantities similar to those offered to jobbers.

Because of this narrowing of outlet for the jobber's goods, the latter has in many cases gone into the retail business. This has stiffened competition in retailing and caused cries of protestation from members of the retail trade. The jobber has replied that he must create a market for his goods by going into retailing, since the manufacturer has provided a market for himself by creating a consumer-demand, and because the retailer has sought to eliminate him by going over his head to the manufacturer. Such action on the part of the jobber made the problem more complicated.

IV

About the same time as jobbers began complaining that the retailers were seeking the jobbers' elimination, the retailers in their turn were complaining that the jobbers were seeking to eliminate them. This was being accomplished, said the retailers, by the jobbers' taking the "cream of their business," *i.e.*, by capturing the trade of large establishments, such as boarding-houses, hotels, public institutions, societies, clubs, etc. To this accusation the jobber replied that these buying units desired goods in large quantities such as were being sold to retailers, and that it was no more than right that these units should be supplied direct and given a quantity discount.

V

In the midst of all this confusion, the manufacturer had been advertising in the effort to create a market for his goods, but success had been uncertain because of the other factors in the marketing system. It is true that by means of advertising consumers were led to ask for the advertised goods in retail stores, but jobbers were coaching retailers to substitute the jobbers' brands for the advertised articles. Substitution proved to be surprisingly easy, and the longed for and eagerly sought after outlet for the manufacturer's goods proved to be a mirage. Something had to be done to remedy the situation. As cleverly distinctive trade-marks and convincing copy would not prevent the retailer from making substitutions, some other means of protection had to be found.

After bending every effort to eliminate the jobber and to force goods upon the retailer, the manufacturer's pride naturally revolted against making overtures to them. To the major-

ity of manufacturers, however, this appeared the only way out of the difficulty.¹ The old channels of marketing must be used but some new way had to be devised to get the jobber and retailer to *co-operate* with the manufacturer in securing the largest possible distribution. If a fairly large distribution could be obtained, one large enough to enable the plant to continue production in the face of decreasing costs, that was all the manufacturer desired. And if some rapprochement with the jobber and retailer could accomplish this result, then that was the thing to do, and that was the thing the manufacturer proceeded to do.

A new turn in the readjustment of the factors of marketing was thus given by the manufacturer's return to the old channels of distribution. While so doing, however, the manufacturer has not relinquished his advertising. He still creates his consumer-demand, but he does not expect too much of it. He no longer looks upon consumer-demand as a force capable of over-turning established methods of marketing goods, but, rather, as a supplementary device enabling him to establish a permanent, stable, progressive trade when used in *conjunction* with present marketing facilities. Advertising is now viewed as a means of securing the co-operation of both the jobber and the retailer, rather than as a means of eliminating either of them. As a consequence, the jobber and retailer, realizing their permanence, are acquiring a much healthier frame of mind towards the manufacturer's goods.

VI

The question arises, How has the manufacturer succeeded in thus securing the co-operation of the jobber in

¹Only a comparatively few manufacturers could create their own retail outlets.

enlarging his distribution? This has been accomplished in the first place by dealing fairly with the jobber and giving the latter *all* of the manufacturer's goods. Assured of all of the manufacturer's business, the jobber undertakes to give it a broad outlet into retail channels. In the second place, assured of a large staple consumer-demand, the jobber is induced to handle the goods even though a smaller percentage of profit may be secured than is derivable from unadvertised brands. In the third place, the jobber is assured of a retailer-demand because of certain methods recently applied by the manufacturer to secure for his product the retailer's good-will. These methods took the following forms:

After satisfying the demands of the jobber and securing his whole-hearted co-operation in acquiring wide distribution, the manufacturer found he still had a retailer problem on his hands. The retailer in many instances had been opposed to handling nationally advertised merchandise because it carried a smaller percentage of profit than did jobber's brands. In such cases, even though there was a consumer-demand and the jobber was willing to handle and push the advertised manufacturer's goods, the retailer was enticed away to goods giving a larger profit by other jobbers to whose interest it was to handle them. This situation demanded an educational campaign for the benefit of the retailer conducted by the manufacturer, to whose interest it was to widen the outlet for his merchandise and make good the vast sums that had been expended in the creation of the consumer-demand.

This effort of the manufacturer to get the co-operation of the retailer has taken many forms, but one of the first necessities of the case was to con-

vince the retailer that a larger total profit could be made on advertised brands than on unadvertised, even though the advertised brands did not carry so large a profit per sale as did those unadvertised. This was often a most difficult proposition to prove to the retailer's satisfaction. An advertised article might only carry a gross profit of 25 per cent while the unadvertised brand perhaps carried a 40 per cent margin. To show that the selling of the higher-margin goods lost money to the retailer in the long run was the task of the manufacturer, and this he accomplished by proving that it *cost less to sell* the advertised goods. The manufacturer argued that his goods could be sold in larger quantities, in quicker time, and by cheaper salespeople, than could unadvertised goods, since the manufacturer's goods were already partially sold before the customer came into the store. Likewise he argued that the *prestige* of the store handling well-known goods was greater than that of a store handling less well-known brands. The fact that the demand for the advertised goods would be more stable was also insisted upon, as well as the ability of the jobber to give prompt and efficient service.

But the manufacturer did not stop here. He not only proved to the retailer that the latter could make more money by handling the advertised line, but he went even further—he *helped the retailer sell it*. In other words, the manufacturer held that his obligation to the retailer did not cease when the goods were produced and given to the jobber and when advertising copy had been placed in magazines and newspapers. In addition the manufacturer took upon himself the obligation of moving the goods off the shelves by teaching the retailer methods of salesmanship and

advertising *within* the store. These co-operative selling methods have taken many forms, but the most common of them are found in dealer-literature, window displays, and demonstrations.

VII

Dealer-literature seeks to portray the selling points of the goods in the most concise and convincing manner, as well as to indicate its superiority over that of competitors. Human-interest copy, such as that describing processes of manufacture, origin of raw materials, meaning of designs, and history of development, arouses the enthusiasm of both retailer and salespeople. A statement of the tests to which the goods have been subjected tends to secure the confidence of the store in the goods; while comprehensive enumerations of ways in which the merchandise can meet the divergent needs of customers give salespeople interesting and logical material out of which convincing sales talks can be constructed. This effort to make retailers expert in the selling of their goods gives manufacturers an advantage which means more to them than even their consumer-demand. In the last analysis, the retailer is the key to the marketing system. Efforts of manufacturers within recent years indicate that they are at least aware of this all-important fact.

In the matter of window displays, some manufacturers provide at cost to the retailer a monthly service of window display. This high grade service has been prepared by experts. Each display is tested for its selling power before being sent from the factory. Invariably it represents a far greater value than it costs the retailer. Not only is such display designed from the standpoint of selling power but likewise from the standpoint of ease of

installation. Each display can be quickly set up by unskilled salespeople. Furthermore, the display is arranged in parts so that it can be made to fit any window. Similar service for aiding the merchant is being provided by other manufacturers.

Besides these internal methods of moving advertised goods off the shelves, the factory sends demonstrators from time to time to prove to the store's customers that what is claimed in the advertising matter is true. These demonstrations, while valuable from the standpoint of securing new customers for the store and being an advertising feature, have added value in creating in the retailer and his salespeople renewed enthusiasm and confidence in the merchandise. When the latter are *sold* there is little difficulty in selling the street. The manufacturer is beginning to realize that he must *sell* the retailer and his salespeople the *idea* before he can hope to sell them the *actual* merchandise. And this holds true even though an order of the actual merchandise is already in the store. More goods will not be ordered unless the merchandise in stock moves quickly. The methods indicated above are designed to result in quick turnovers.

VIII

From all this it might appear that the manufacturer has met the retailer more than halfway in his attempt to increase the distribution of his product. However that may be, he seems willing to go still further. Many of the more progressive manufacturers are not merely satisfied with educating the retailer to sell more of *their goods*, but they are carrying out a plan of retailer education which aims to enable the retailer to sell more of *all goods*. Justification for this wider education

comes from the growing belief that the more prosperous the retailer can be made, the better customer he becomes. The more prosperous he is the sooner he pays his bills, the more trade he draws, the more loyal he becomes.

The nature of this wider retailer education varies under different circumstances and with the needs of the various merchants, but usually covers better accounting methods, more efficient store arrangement, up-to-date advertising, business-building salesmanship, trade information on how to meet competition, specific questions of price-fixing, figuring turnover, etc.

Preceding paragraphs have shown that manufacturers are more and more abandoning *coercive* methods and are adopting *co-operative* means of increasing their distribution. Many of them have come to realize that they cannot perform the jobbing function so cheaply as the jobber, and that it is desirable to retain the jobber in their distributive scheme if he can be induced to push their goods. This desire of the manufacturers has been partially attained by helping the jobber to get a market for their merchandise and by assuring him 100 per cent of the output. On the other hand, the manufacturer has come to realize that he cannot hope to get distribution without the help and friendly co-operation of the retailer. Hence he is becoming more and more friendly to the retailer, taking upon himself some of the responsibility of getting the goods off the retailer's shelves. He thus proves to the retailer that quick turnover is not a mirage but a reality, and because of this tangible proof the retailer is much more attracted toward advertised goods, even though they bear a less percentage of profit than advertised manufacturers' brands.

The retailer seems to be the key-stone in the marketing arch. A read-

justment of stones has been made and some of them have been temporarily left out, but the falling arch has made necessary a quick new adjustment in which the retailer has been recognized as being in the most strategical position. A realization of this fact by retailers ought to go far toward voluntary co-operation on their part with the other functionaries in the marketing system.

It is apparently true that where co-operation is impossible integration is inevitable, and where integration is impossible co-operation is inevitable. In the majority of cases integration of marketing functions has been impossible and hence co-operation of market functionaries has resulted. Integration has been impossible in most lines for several reasons. For one thing, manufacturers lack capital to purchase or create their own retail stores. Moreover, they lack ability, capital, and experience to create their own jobbing department. Again, they could not secure wide distribution through small selling organizations. And finally, retailers and jobbers boycotted the manufacturer's products in territories where their own selling organizations could not penetrate. Where wide distribution can be secured for a product by eliminating the middleman and taking over his functions, integration is the logical development; but where the difficulties involved in the combining of functions are too great, wide distribution can be secured only by intelligent co-operation with the existing marketing mechanism. This co-operation is going on in the grocery and other lines where wide distribution is difficult to secure through a manufacturer's selling organization.

That close co-operation between the market functionaries will ultimately produce a few large integrated systems rather than numerous small inde-

pendent organizations is a possible development of the situation. Co-operating with a merchant to the extent of moving his goods off the shelves and improving his general merchandising methods may possibly lead to a more intimate association wherein additional selling functions of the retailer will be taken over by the manufacturer until complete integration takes place between the merchant and the manufacturer, or between the merchant and other stores with which the manufacturer has similar connections. Although drug manufacturers had apparent insuperable difficulties to overcome in securing their retail outlet, these have been overcome by a co-operative combination of stores in which the manufacturers are financially interested, while the stores in turn are financially interested in the business of the drug manufacturers. Here integration has absorbed a wide field of goods from a co-operative starting point. Similar tendencies are seen in other directions.

IX

This article has already indicated that integration became an important disturbing force when the supply of goods increased at a more rapid rate than the demand. It should be understood, however, that supply is not the actual amount of shoes, clothing, or furniture that is on the market at any one time, but rather the potential supply or productive capacity of manufacturing plants. In other words, the ability to produce goods in large amounts exists at the present time, while during the last century productive capacity existed between narrower limits. If productive capacities are utilized to their fullest extent, costs per unit of product decline; if they are only partially utilized, costs are higher.

To get into a more advantageous producing stage, an outlet for production must be secured.

The decreasing cost stage of production is sought by manufacturers not merely because it will return larger immediate profits. A more vital motive is present. Production under decreasing costs produces a cushion of profits which serves as an insurance fund for the profitable continuance of the business during periods of depression and in spite of vigorous competition. For example, if the production cost of an article, including a fair profit, is 20 cents because of production under decreasing costs, while the production cost of a similar competing article is 24 cents because of less favorable production costs due to inadequate distribution, the selling price will be fixed by the latter producer, and the article will sell for 24 cents. The first manufacturer could afford to sell the article for 20 cents if he was forced to do so, but under ordinary competition he may elect to keep his present production and sell his article for 24 cents, making an extra profit of 4 cents per article. This extra profit in the aggregate will serve as a cushion to ease up the shock of adverse business conditions, while if the market contracts he is able to lower his price to 20 cents and put his competitor out of business. It is this protection given them by decreasing costs that makes manufacturers struggle for wide distribution which will enable them to produce under the most favorable cost conditions. In some lines integration of marketing functions produces the desired result, while in other lines co-operation in its varying degrees of completeness makes a temporary enlargement of distribution possible. The struggle for business protection is at the root of the struggle for markets.

ECONOMY IN THE NEW ADMINISTRATION

BY CHARLES G. DAWES*

AT the present time everyone recognizes that we are facing in this country a necessity for economy in governmental expenditures. The exorbitant taxes our people are paying are depressing business. Our industries are languishing; our farm products are selling at around or less than the cost of production; labor of all kinds is being thrown out of employment; profits of all kinds have been reduced or extinguished. The floating debt of the government is about \$2,500,000,000. Including this amount, this government is faced with the necessity of providing for maturing obligations within the next two and one-half years amounting to about \$7,500,000,000, in addition to raising the amount required for its running expenses.

For the fiscal year of 1921, the Secretary of the Treasury estimates the expenditures of our government, apart from transactions in the public debt, at \$4,851,298,931. In this amount there is included an estimated deficit of \$36,895,000 in the postal service, and there is not included the expenditure of the Post-Office Department of \$467,500,000, which he estimates will be to that extent covered by postal revenues. The sum total, therefore, of his estimate of the gross expenditures, not including any transactions in the public debt, is \$5,318,798,931.

Subtracting from this amount the estimate of the federal control of transportation systems and Transportation Act of 1920, interest on the public debt, pensions, purchase of obligations of foreign countries, and

various other expenditures not involved in ordinary business administration, and amounting roughly to \$2,700,000,000, we have left the enormous sum of approximately \$2,600,000,000 annually as that which would be affected by any plan for decreasing governmental expenditures through the institution of a proper business system.

Certainly with this enormous sum involved, no more important task confronts the next administration than the inauguration of this plan.

It has been the habit of many to criticize Congress for the enormous expenditures of the government. As a matter of fact, the primary responsibility for extravagance has been in executive administration, and Congress has been exercising the only authority which has protected the American people against the riot of extravagance which has characterized departmental administration.

During the twenty years up to and including the year 1916 (the year preceding the war), there were only two years in which Congress did not cut down appropriations below the amount asked by the different departments. The net reductions which Congress made during this period in the interest of economy amounted to \$555,000,000. But more important than this saving is that within the last two years Congress has cut down the estimated expenditures of the departments by billions of dollars. So far from being opposed to a reform of the governmental business system, Congress has been the leader in urging it.

Under the present system of transacting governmental business, no re-

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sponsible business head, either in the present or past administrations, has thought in terms of the government as one business institution and outlined its business program as a unit in proper relation to the taxable resources of our people. The different departments of government have not been co-ordinated. Each has gone to Congress for appropriations direct, thinking only of its own needs, and entirely indifferent as to the needs of other departments or of the government as a whole.

The department chiefs have felt no executive pressure from above, for economy and pressure within the department is exerted along lines which tend to increase expenditures—to prevent co-ordination, to decentralize business, and to increase independent power. No one in the government is charged with inaugurating methods of co-ordination between the departments by which public economy can be secured and business methods simplified.

II

I do not wonder that Congress is aroused. In its effort to force the administration to a better conduct of government business, it is proposing a budget law.

Let me in this paragraph take an illustration from business: Supposing a business corporation was faced by a grave financial emergency and had great difficulty to meet its pay-roll and to preserve its solvency. The feeling of its board of directors who have a responsibility in such a situation, just as Congress has in our governmental business situation, can be well imagined when an examination of the administration of the president of the corporation developed that he never bothered himself with the determination of how the machinery of his corporation could be more economically administered; that

the estimate of expenditures of the corporation was made independently by ten subordinate vice-presidents, each in charge of a separate operating unit of the business and no one of them concerned particularly with the operations of the other; that it was the habit of the president to encourage these administrative vice-presidents to run their particular part of the machine independently of each other and to make their estimates of the amount of money which should be appropriated to them entirely without his supervision in the interest of the corporation as a whole; that not only would he never give any attention to the problem of determining whether or not the general work of the corporation could be forwarded and its expenses lowered by proper co-ordination of these units and the reduction of duplicate installations and unnecessary employees, but, on the contrary, had allowed every administrative vice-president, without any central control, to fight for the extension of this kind of decentralization and lack of team-work. That this, almost without exception, has been the attitude of former presidents of the United States, I think no one will deny.

Our new President, under the Constitution, selects his cabinet, which in our governmental system occupies a position analogous to administrative vice-presidents in a corporation. With the power of selection he has also the power of removal, and I do not think he will temporize for a minute with the old system so far as his power over his administrative Vice-Presidents, so to speak, can alter it. If the Cabinet heads are not willing to do team-work and to co-ordinate and to carry out his plan for business supervision and economy, made simply in the interests of the people of the United States as a whole, he should remove them.

Under the law of March 4, 1909, as has been very frequently pointed out by members of Congress, in recent times the authority to unify the business of the government and put it into proper system exists in the President. His very position as head of the executive branch of government implies not only the power but the duty to do this. Unless he is willing to assume this great task, a budget law will not materially correct the situation. The budget law will help the President to do his duty. But even without a budget law, with the control he has over the Cabinet he can inaugurate this system.

III

In my judgment it is not necessary and it would not be best for the country if, in connection with the making of a budget law, Congress should surrender any of its present power to the executive. Congress is made responsible by the Constitution for appropriations.

The proposed reform is peculiarly an administrative, as distinguished from a Congressional, reform. What Congress properly demands when it appropriates money is that there should be a proper business organization to expend it economically, and what former presidents have failed to do is to so organize their business machine as to make this possible. If the business machinery of the government is properly reorganized by the leadership and power of the President, whether Congress decides on larger or smaller appropriations, then in either case more will be accomplished with the money than under the present disorganized system. Whatever may be claimed by those who would benefit by the present impossible system, the fact must be clearly kept before the American people that in this reform

only business administration is at stake and only the great question of having the government's money spent in such a way that the government will get full value.

In assuming real leadership over the executive departments in a plan for systematizing the business of the government, the next President of the United States should have the support of every citizen.

His task is one of tremendous difficulty, not only because of its magnitude but because of the multitude of selfish interests which will attempt to block it.

The attempt to abolish duplicate installations doing the same work in a great country like this, will, in almost every instance, arouse tremendous local opposition. If it is proposed to shut up an obsolete navy yard, there will come a demand upon the members of Congress from that locality to insist upon its retention. If, for example, in the co-ordination of the army and the navy, duplicate ordnance and hospital installations are eliminated, local interests will demand the oppositions of their representatives in Congress. When the proposition is made for a consolidation of the numerous secret service bureaus, there will come opposition which will be reflected in pressure upon the members of Congress. When the proposition is made to shift between the different departments various bureaus so as to secure better co-ordination, there will come a tremendous outcry from the adherents of the *status quo* against something which may affect their individual interests. So greatly is the inertia of the *status quo* under the present impossible business system, which has been in existence during almost the entire life of the government, that nothing but the great powers of the President, assisted by Congress, can prevail against it.

INDUSTRIAL RELATIONS—AT HOME AND ABROAD

BY DWIGHT T. FARNHAM*

AMERICA,—Since the Peace Conference, America is supposed to be fed up on European affairs. So are the people who cross Fifth Avenue at Forty-second Street fed up on motor traffic. But they cannot close their eyes and ignore the traffic the next time their business calls them from the Grand Central Station to Times Square. They can't keep out of the traffic. We thought Wilson could keep us out of war. We thought D. Copeland could keep out European influenza. And now we favor the withdrawal of the hem of our garment, as it were, from contaminating European influences simply because we have troubles of our own and because the financial statements of western Europe indicate that they are the impecunious sort of people we cannot afford to know. Charity is expensive and it ought to begin at home.

The connection between Bill Jones, out of a job in Detroit, and what is happening in Europe seems remote—to Bill Jones. But somebody has got to feed Bill Jones. We can appease Bill's appetite in a soup kitchen, or we can let him go hungry and force him to apply the direct methods he learned on the western front—"when you see what you want, grab it"—or we can do some thinking ahead—so Bill won't be out of a job. We've a choice of methods. Thinking is hard work, of course, especially when it means "understanding the European situation," but it is a better method in the end than pauperizing Bill Jones or than hanging Bill Jones, especially when there are so

many of him that he may have something to say about it, as he did in Russia when hunger knocked too frequently at his door.

It has been said that the prosperity of this country depends upon the profitable exportation of the 2 per cent produced above our actual needs; that when this 2 per cent cannot be sold, a seller's market becomes a buyer's market, whereupon somebody who holds this 2 per cent cuts the price. Then you and I and Bill Jones conclude—"the profiteers are on the run, prices are on the toboggan, let's stop buying." Factories in consequence shut down, industrial stock dividends are passed, customers refuse to pay their bills, and Bill Jones walks the streets of Detroit in his silk shirt.

"Yes," you say, "but what's all this got to do with European affairs? Europe is down and out. We've got troubles enough of our own. We can't afford to feed a bread line reaching across the Atlantic. Let's attend to our own business."

All right, but the prosperity of our own business depends upon the earning power of our factories, railroads, and ships. The earning power of these properties depends upon their ability to dispose of their product—whether it be pickles or passenger service—at a slightly greater price than it costs to produce. The more we produce the less it costs to produce each unit, and the lower the cost the wider the market for your goods and the better we can meet competition. It is a case of: to him who hath production, to him it shall be given to produce, and vice versa. If you and I and Bill Jones need

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production to be prosperous, Bill Jones must work hard and we must sell what he makes. We've got an expensive mercantile marine. A foreign trade corporation has just been organized to help countries with depreciated currencies to buy our goods. We're ready to supply the whole world with American-made goods—at a price.

At the present rate of exchange a skilled machinist costs \$45 a week in America, \$14.70 a week in England, \$8.31 a week in France, \$5.47 a week in Italy, and \$4.68 a week in Germany. In the United States our skilled workman is operating from four to six automobiles; in England from two to three; in France from two to three; in Italy from one to two; and in Germany from three to four. Even if we assume that a workman abroad produces only half as much as our Bill Jones, there is still the handicap of his wages which are from three to nine times higher than those abroad.

Our European competitors for world trade also learned something during the war. In Italy, in France, and in England, huge ferro-concrete factory buildings erected during the war are filled with American machine tools and operated under American methods—where they haven't developed something better. Italy and France are turning Alpine waterfalls into power plants. The rains furnish water in the wet season and the melting glaciers in the dry season. Belgium is building her power plants at her coal mines, finding it cheaper to ship pure current over wires than coal and ashes in freight cars. In Berlin I saw factory buildings embodying everything which we boast about in the way of stability, light, and effective layout with the date 1878 on the corner stone.

European methods of industrial management are not the hoary antiquities they are supposed to be by the Ameri-

cans who have taken the sort of a trip through a European factory which Henry Ford offers farmers visiting Detroit. The European business man isn't given to bragging about his smartness and others can blow their trumpets as loudly as they please, provided he gets the profit. He doesn't invite the casual visitor in to inspect the innermost secrets of his business. He knows that the ultimate cost to the consumer is what sells goods in the end. He knows that an automobile, or anything else made to last fifteen years, and manufactured by careful hand labor, at low wages, on cheap ground, in an ancient building whose value has been written off for twenty years, costs less in the end than an automobile which will last two years which is manufactured in the high-rent district of a big city, in a fancy million-dollar factory building, by high-priced labor, on expensive machines which the manufacturer's production policy forces him to scrap every two or three years. Our policy of scrap it and buy a new one results in our being, as a nation, the most stylish people on earth. We apply the rule to clothes, to houses, and to factories, but it is the most extravagant way of living on earth. It isn't going to help us win the International Trade Handicap and it isn't going to keep Bill Jones at work.

Scientific management, in whole or in part, has been introduced into factories in Germany, in Italy, in France, and in England. Time studies—the determination of a fair day's work by means of a chronometer—have been in use in France since the seventeenth century. The larger Italian industries have their industrial engineers whose job is to install the latest and most effective methods of manufacture. The most complete installations of scientific management I have ever seen are in England. At La Creusot, where the

guns which in 1914 saved civilization were made, methods of rate-setting, which we "invented" in America only a few years ago, have been in use for over thirty years.

Before I left America a professor in one of our eastern universities asked me to find out if employment management—something we thought we gave to civilization during the war—had been introduced into France. He said he had written to Brentano's but hadn't been able to secure any literature on the subject. At one of the Schnieder establishments where they employ over a hundred thousand men and manufacture everything from automobiles to Big Berthas, I spent an hour in the largest and best equipped employment department I have ever seen. As we finished I asked the director of personnel in charge how long the department had been in existence. His reply was "*Toujours!*" (always) meaning to the employees of Mr. Schnieder, some twenty years before our American Revolution! The reason my friend had been unable to obtain any literature on employment management was because it was so old and taken as such a matter of course they had stopped writing about it!

Safety First is another one of our industrial children whom we like to trot out with pride when the minister calls. Since I returned from Europe I am more than ever convinced that he is a lusty infant with a future before him, as I met two of his grandfathers in Germany, another in Italy, and three more were fighting for the honor of siring him at the Safety First convention in England in September. So it is with welfare work, schools for apprentices, factory canteens, crèches, plant doctors and dentists, athletic instructors, workmen's housing schemes, co-operative stores, hospitals, athletic fields, and factory magazines. Ger-

many has developed psychotechnical tests for workmen and is using them in her factories, while we are only discussing the practicability of such methods for fitting square pegs into square holes in industry.

About a year ago when Bolshevism was haunting the dreams of our manufacturers, workmen's representation schemes captured America by storm. Every manager worked out his own pet scheme for keeping quiet the brainless monster which the war had loosed. Some manufacturers elected a workman to the board of directors where he sat in the embarrassed silence of the parvenu who doesn't understand the ritual of dining in the highest circles. Others told him he was to manage the business, whereupon he promptly voted himself a raise in pay, only to find he had been gold-bricked. Others met him man to man and through committees asked his help in settling those minor matters which often irritate labor to the point of laying down tools and striking. England didn't leave the peace-making business to personal initiative. She appointed a government commission, some three years before we were frightened into our wild experiments and now she has firmly established a carefully thought-out workmen's representation plan. Germany went her one better. She tied up the Ministry of Raw Materials with the workman's representation plan and the German engineering societies so that not only are the workmen given an opportunity to air their grievances, but they are taught their responsibilities in the success of German industry as a whole and are trained in the most effective methods of production.

Even more important is the general consolidation of industry which is taking place all over Europe. We used to boast about our General Motors Com-

pany which employed nearly ninety thousand men. In Italy on the last day of the war the Ansaldo Company employed an equal number. In France the Schnieder establishments employ more than a hundred thousand without counting the Skoda plants they own in Czecho-Slovakia. The industrial army of Vickers Limited in England is more than a hundred thousand. The A. E. G. in Germany is even larger. There are no Sherman Anti-Trust Laws in Europe. In Germany even small companies are organized in such a way as to give them not only the advantage of purchasing in large quantities and of exchanging production standards and methods of manufacture, but also the benefit of the discoveries of research committees operating under the direction of the Ministry of Economics and Production. Bigness has always been our final and most crushing boast. Already Bill Jones's boss has lost that satisfaction and if he doesn't watch his step, he'll lose something far more vital to Bill's continued welfare and employment—the wherewithal to meet the weekly pay-roll.

One of our worst handicaps in the race for world trade is our weakness for what the British term "window dressing." We are so used to putting our most beautiful apples on top of the basket and to manufacturing our sample shoes in special lots, that it pains us dreadfully to be accused of the Yankee tricks of our ancestors who sold wooden nutmegs and basswood hams. More than once while traveling in the North Country, that black manufacturing district which is the real England, I heard the expression "Isn't that just like a damned Yankee!" Before I left New York I had been told by the vice-president of one of our greatest banks that the American manufacturer was considered a crook all over Europe because the goods he delivered weren't up

to sample, while the samples submitted by Italy, France, Germany, and England represented the average or worse than the average. Think it over Mr. Manufacturer the next time you hunt through the pile for the best looking hat or the best looking pair of shoes to ship to Europe or to South America. We've got something to live down, if we are going to win the World's International Trade Handicap and keep Bill Jones from listening to the soap box orators on our street corners.

Another thing—only recently have we ceased to be proud of shirt-sleeve diplomacy. Instinctively our virile American business man hates knee breeches, red ribbons, and monocles almost as much as he used to hate wrist watches before the adoption of the habit by some five million of the toughest fighting men any country ever produced made it unsafe to murmur "Hello Clarence!" when one was encountered in the street. We still scorn the finer arts of business negotiation. We like to bull it through by sheer force of personality. It is so much easier than to think the whole thing out beforehand, taking into consideration the likes and dislikes, the historical background, and the racial psychology of the foreigners we are dealing with. Rough and ready—that's our motto. I saw some of that rough-and-ready stuff at the organization of a certain international trade board in Paris. The American delegation didn't know French. When an Italian made a speech he made it in French while all the Belgians, Frenchmen, and Britishers understood it and had their plans laid about the time the interpreter had blundered half-way through what passed for a translation. As a result the American delegation was left at the post whenever it seemed desirable. When an American made a speech more than likely he indulged in

what the British chairman referred to as "picturesque Americanisms"—the sort of stuff with the "pep" we like to hear and applaud our public speakers for. As a result the interpreter was usually aghast when we finished and the whole meeting had to go into executive session to decide exactly what we did mean and to get it translated into French. When it came to the interpretation of parliamentary law we found out which nations invented parliaments and which nation was new to that form of government. The British could slam a motion onto the table and indulge in three asides and two caustic rejoinders before the American chairman could get his throat cleared. And many times when we brought in a resolution—something which in all innocence we believed would do the effete nations of Europe worlds of good—we trod on others' toes and walked on seventeen varieties of pet corns we didn't know existed. It required endless tact on the part of our delegates who were internationally minded to convince the conferees we weren't trying to wreck the peace of Europe.

A celebrated English editor whom I met in the National Liberal Club in October likened the negotiations held during the formation of the League of Nations to a poker game in which a callow youth with high ideals found himself up against a bunch of experienced and hardened players who not only knew the game, but the cards and each other's personal tricks, as well. "There could be only one result," he said, "and now the old players are howling to Heaven because the parents of the crooked young man won't pay up." If we are to win even a place in the International World Trade Handicap, we must learn the art of sizing others up for what they are. A Frenchman isn't crazy because he wears a beard and gesticulates and it is a safe

rule to follow that an Englishman is never as big a fool as he looks.

I visited Hog Island shipyard just before I sailed in May and the assistant general manager told me he had piloted so many celebrated Englishmen through the works that he was considering the preparation of a book on "Lords who have met me." The notice taken of our congressional resolutions in regard to free Ireland were nothing to the howl that went up in England when Secretary Daniels made his "biggest navy" announcement. A man I met in Berlin told me what would happen to us when our mercantile marine began to bump against English competition. "I have been in the business and I know. The profit in shipping depends upon the cargo turnover—upon how quickly you can coal, load, sail, unload, coal, and reload. When you fellows enter a harbor you'll find the English own all the best docks and all the best coaling stations. If there are English ships in, or expected in, you'll have to wait two, three, four days, or a week whenever you need coal or a dock. In some places there are plenty of docks reserved for British ships and one dock for foreign ships. British ships get in and out the same day. You can wait your turn behind a long line of Italian, Greek, and Japanese ships. O, yes, you will learn something." Incidentally the British had a chamber of commerce organized in Cologne eight days after the armistice and I found their travelers on every train in Germany, while Americans who entered the country had their accident insurance policies canceled by the home office. American travelers are a curiosity in Berlin and we are still at war with Germany!

As guests of the Italian government, we were shown industrial Italy for two weeks. Out of the war Italy has emerged as an industrial nation, a

power to be reckoned with. She has factories, industrial organization, water-power, silk, flax, and some steel. She is building wonderful harbors at Genoa and at Venice. The men who built them showed them to us and they will be something to boast about. If you doubt that the Italian is a good builder and mechanic you should see certain great shipyards near Genoa, you should ride sixty miles an hour through the passes of the Dolomites, as we did, in motor cars fifteen years old. If you are skeptical of his enterprise you should talk with his industrial leaders, men who not only know their own business thoroughly but who understand the problems of sister industries and of Italy in relation to the world. As for the industry of her workmen, you should visit the reclaimed area near Venice. There, in fields surrounded by mulberry hedges, you will see ten crops harvested a year, with wheat, stubble, ploughed ground, and green shoots in the same fields, with fruit trees set a hundred feet apart and vines on the wires stretched from tree to tree, with the fields surrounded with ditches in which ducks are swimming and reeds suitable for basket making are growing. If that isn't intensive farming, the phrase means nothing. We can no longer consider Italy a land of art treasurers of banditti and of ruins. *Italia Irridenta* must be translated "Italy has come back," and we must consider her in that light if we are to obtain a true picture of European industry.

Europe is still sick in spots but we mustn't let appeals from starving Poland blind us to the fact that western Europe has gone back to work, that she has had her battle with Bolshevism and has in most cases come off victorious, that she is living thriftily, and that as a competitor she is to be reckoned with. On paper Europe seems

in worse condition than she really is. We must remember, however, that even bankrupts survive their poverty—continue to eat three squares a day, keep on having children, and eventually may see their former creditors die in the poor house—and western Europe is not yet even bankrupt. Indigestion is her worst trouble at present. The economic balance of Europe is the product of centuries of development. Russia was the supplier of raw materials and the consumer of low-grade merchandise. Italy furnished the rough labor and the builders for all Europe. Italian labor even built the Trans-Siberian Railway. Russia is out of it. Italy has three million men employed on roads, harbors, and public works to prevent them from going Bolshevik. Germany is in the position of the man who expects foreclosure and is pleading poverty and concealing his assets. As a result there is a general derangement of the body politic, just as the human body is upset when the stomach ceases to function properly. Europe will continue to feel peckish and "off its feed," as the Englishman says, and exchange will continue to fluctuate until the amount of the German indemnity is fixed, until Russia is ready to furnish raw material and absorb low-grade goods, and until Italy can properly employ her surplus population. Until these things take place, western Europe will continue to be on the sick list.

"All right," you say, "if she is crippled but dangerous, we'll knock her crutches out from under her and then hit her as she falls. We'll erect a tariff wall around this good old land of ours, we'll stop immigration, and we'll return to a state of splendid isolation." Fine, but unfortunately the world has become one big industrial nation. We all live in big cities created by commerce and manufacture. Millions of

men are employed by railroads, banks, steamship lines, and we are all to some extent dependent upon the maintenance of international relations. Russia has had to go back to the farm and, though mainly an agricultural nation, which we are not, the erection of a wall around her boundaries has been as painful to her inhabitants as shutting them up in gaol. Besides, Europe owes us money and the only way she can meet her debts is to ship goods to America. It is possible that she might retaliate and build a tariff wall herself and prevent our shipping our surplus over there, however badly she needs it. The life of a hermit is all right if you live on a farm and produce pigs and vegetables, but neither the coal man nor the steel manufacturer can subsist by consuming his product. Somehow it doesn't quite look as if the tariff wall would work this time. We are so tied up with the industrial life of Europe that even her death would be a menace.

England's method of keeping her manufacturers and her workmen up to the mark has been to give widespread publicity to the activities of her competitors. Her papers feature what is going on in industrial America and in industrial Germany and print the accounts of murders and holdups on the inside pages. Just before I left London, all the papers were commenting editorially upon England's loss of a large sale to Germany. South America had called for bids on a gas plant. The lowest British bid was 162,000 pounds with three years' delivery. Germany got the business with a bid for 90,000 pounds and three months' delivery. I wondered what the United States was doing. A little later American steel-makers underbid the British on a Welsh job. The English papers were full of it. Furthermore, every technical magazine is filled with accounts of German and American methods.

American enterprise has been preached until the older generation of manufacturers are as ready to explode at the mention of our name as you would be if your wife tried to reform you by quoting—morning, noon, and night—the virtues of your next-door neighbor. But the young ones are learning. They know all about scientific management, mass production, and American machine tools. Germany, France, and Italy are equally interested. In traveling about it was often difficult to secure information because manufacturers, business men, and university professors kept me talking on American methods and the methods of other European countries. They were not spending their time telling how good they were nor were they fooling themselves with any dream of splendid isolation. They were after information and were thinking in international terms.

Our problem is to keep Bill Jones employed, to make it possible for all of us to pay our bills and to maintain reasonable earnings from the invested capital of America. We have a mercantile marine and we require an international market for our surplus products. We have a rejuvenated industrial Europe to face. We are fat, prosperous, and lethargic. Our competitors are poverty-stricken, lean, and ambitious. European labor has gone back to work at prices which our present rate of exchange make it seem hopeless to compete with.

The remedy lies in the encouragement of such measures as will drive exchange back to normal and restore the economic balance of Europe. It lies in the popular study of European conditions, methods, and peoples. It lies in intelligent travel upon the part of our business men and in that progress in the art of international thought and negotiation which only knowledge of world facts at first hand can give.

THE PRODUCTION BUDGET

BY JAMES O. MCKINSEY*

IN the article on "The Sales Budget" the method of determining sales possibilities and formulating a program for their realization has been explained. The sales program contemplates the delivery of certain commodities or services to the customer. To execute this program it is necessary that these commodities or services be delivered at the time and in the quantity demanded by the customer. This necessitates that plans be made which schedule deliveries from the factory or the vendors in such a manner that sales demands may be met. Such plans require the preparation of a production or purchasing budget and the formulation of a production or purchasing program. The general principles involved in production control and purchasing control are very similar, but their application in the two cases differs sufficiently to make the separate treatment of the two problems desirable. It is the purpose of the present article to discuss the production budget. The next article will deal with the buying budget.

II

From the viewpoint of budgetary control, manufacturing industries may be divided broadly into two general classes: those which manufacture standard commodities in anticipation of sales demands, and those which produce goods to order. In the first case, it is necessary to plan production so as to have available the goods required when the sales order is received. In

the second case, it is necessary to plan production so as to be able to produce the goods as quickly as possible after the customer's order is secured. The preparation of a production budget for a manufacturing industry, producing for stock, will be first explained. Such modifications as are necessary for a business producing on special order will then be stated.

III

As explained in the discussion of the sales budget, the sales estimate, as submitted by the sales units, should be revised by the production department with the object of producing the estimated volume at the lowest possible cost. The sales estimate may require the production of some items in such small quantities that they cannot be produced economically, or it may call for other items in larger volume than is practicable. To provide for a well-balanced production program, avoiding the overloading of some departments and a lack of work in others, the production department should have available data on production capacity which will indicate the necessary revisions in the sales estimate.

In so far as possible, machinery and equipment should be well-balanced and flexible, thus making it possible to adapt production to variations in sales demands. There is a limit, however, to the extent to which machinery can be adapted to different uses, and there should be an attempt to harmonize the sales program with the factory possibilities. Often it is possible through the extra efforts of salesmen and by means of advertising to increase the

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sales of the items which the factory is best equipped to produce.

If the production department makes a careful revision of the sales estimate, and, if its recommendations are given proper consideration, the sales budget will state the number of each item of goods which must be provided the selling units during the period. To translate these requirements into an estimate of production for the period, it is necessary to take into consideration the inventory of finished goods at the beginning of the period and the estimated inventory at its end. To illustrate, the ten sales units of the X Manufacturing Company estimate their requirements of article *Y* for the next budget period to be 120. The records show that the inventory of item *Y* at the beginning of the period is 30, and it is estimated that an inventory of 20 at the end of the period will be sufficient. The estimate of production for the period will be $120 + 20 - 30 = 110$. Each item on the sales budget must be considered in the same manner to estimate accurately the production for the period.

IV

The problem of the production department is not merely to produce the goods to be sold during the budget period; production must be so distributed throughout the year that the fullest possible use is made of factory floor space, machinery and equipment, and more important still, all skilled employees and as many unskilled employees as possible, may be continuously employed. It is obviously undesirable to operate the factory at 100% capacity for eight months of the year and at 50% capacity during the other four months. Under any system of control, there will be varying production requirements at different seasons

of the year, but two important considerations are: that sufficient stock shall be on hand to fill sales orders; and that this stock be constantly replenished from the factory. It is an economic loss to maintain stocks of finished goods on hand for any longer period than is absolutely necessary to make reasonably sure of prompt shipment.

V

To schedule production so that sufficient goods will be on hand at all times to meet sales demands and yet avoid an excess of capital invested in inventory, it is necessary to set up a schedule for the inventory of finished goods. The ideal schedule would be one which delivered to stock each day the exact amount of goods sold during the day. Such a balance is obviously unattainable, consequently it is necessary to carry an inventory. One of the most important problems of production control is to determine the minimum amount for this inventory and to plan production so as to maintain the minimum.

Since the purpose of the inventory of finished goods is to take up the slack between production and sales, and because of its constant fluctuations, it is necessary that an effective control be exercised over it. This control involves the establishment of maximum and minimum limits, to serve as a check on its size, and the keeping of adequate records and an adequate procedure to maintain these limits.

When sales orders reduce the stock to or below the minimum, a production order should be issued for the amount decided upon as the "quantity to order."

The Production Department should establish minima, quantities to order, and maxima in accordance with the following principles:

1. There should be at all times sufficient stock on hand to satisfy customers' demands, if such demands are consistent with the capacity of the factory.

2. There should not be larger stocks on hand than can be turned over in a period necessary for the production of a similar quantity, unless such quantities do not constitute an economical run.

3. Goods should be produced in quantities large enough to insure economical production.

The following factors should be considered in establishing minima, quantities to order, and maxima:

1. Production period
2. Probable sales
3. Margin of safety
4. Economical run

The production period is the time required from the placing of an order until the finished goods are delivered to the storehouse. In the absence of better statistics it may be necessary to use the average production period, as shown by the records of past production. Obviously investigation and study should be made to determine the desirability of this *average* period and changes made in the light of this investigation.

The probable sales for the budget period are stated in the sales estimate. By using the ratio of the average production period to the budget period, the probable sales for the production period can be determined. To illustrate: if the production period is thirty days and the quarterly sales estimate is 600 units of item Y, the probable sales for the production period are 200.

Neither probable sales nor the length of the production period can be forecast with exactness. Consequently if the minima is established as the probable sales for the production period and a production order is issued when the minima is reached, it will be only in

rare cases that stocks on hand will be exactly depleted when the newly manufactured product arrives at the storehouse. Probable sales may be over-sold; strikes, breakdowns, and delays in deliveries of raw material may interfere with the normal course of production. It becomes necessary, therefore, to have a quantity of finished goods on hand in excess of the probable sales for the production period at the time the production order is issued. This excess may be termed the "margin of safety." This margin is usually estimated at from ten to twenty-five per cent of the probable sales for the production period. Its amount will vary in different businesses and may well vary with reference to different items in the same business. Whenever the inventory of any item falls below the margin of safety, the production manager should be notified so that he may take action if he deems it necessary. Used in this manner, the limit set by the margin of safety serves as a signal.

In determining the "economical run" it is necessary to determine the time necessary for "tearing down" and "setting up" the machines used. This problem usually arises in connection with slow-moving items. In the consideration of such items it is necessary to offset the high unit cost of producing them in small quantities against the capital cost of carrying a large inventory. Considerable judgment must be used and research should be carried on to determine the most profitable procedure. Such a study may often result in the elimination of some items from the manufacturing program either because it is cheaper to purchase the small amount needed from other manufacturers, or to eliminate them from the sales program. Whether they can be dropped will depend of course upon the effect of their elimination on the sale of other items.

VI

As previously explained, the probable sales for the production period are the quantity expected to be turned over during that period. The margin of safety is the amount which it is thought necessary to carry in addition to insure against contingencies. Therefore, the quantity to which stocks can be depleted before a production order is started is the sum of the probable sales for the production period and the margin of safety. This is the minimum. Whenever stocks are depleted to this quantity a production order is started. The product which is specified on the production order passes through the production process and arrives at the storeroom, ideally, when stocks have been reduced to the margin of safety.

When the probable sales for the production period are less than the amount of the economical run, the latter amount becomes the quantity to order.

When the sales are expected to be greater than the economical run, the quantity to order should be adjusted accordingly.

The maximum is the sum of the minimum and the normal quantity to order. It is the danger mark which must not be exceeded. In the case of many products the maximum will never be reached, since, during the time that goods are being produced, stocks on hand are being depleted by shipments on orders. As a matter of practice, the production order is usually issued when the inventory is slightly below the minimum, since the sales order which reduces the inventory to the minimum will probably reduce it somewhat below. In some cases it is better for the production order to be made out for the difference between the actual inventory and the maximum

rather than for the difference between the minimum and the maximum. The reasons for this are apparent.

VII

To enforce requirements as to maxima, quantity to order, and minima, it is necessary to maintain a perpetual inventory of finished goods. The maximum, quantity to order, and minimum, as established for each item of finished stock, will be shown on the finished goods record. Usually this record is kept on what is termed a "balance of stores" form which is especially adapted for exercising effective inventory control. The operation of the record is a simple matter of factory accounting and routine.

A balance of stores record properly operated results in the issuance of production orders with sufficient frequency to provide for the replenishment of stock in accordance with the finished schedule prepared under the production program. But in order that these production orders may result in deliveries according to schedule, it is necessary that there exist an effective production control by means of a systematic organization such as the Planning Department. It is not possible to discuss here the operation of a Planning Department. This is purely a matter of production management. It is important to keep in mind, however, that the planning function must be performed, either by a separately organized department or by different individuals in different departments, if the production budget is to be translated into an effective production program.

VIII

The preceding discussion has treated primarily of the problem of producing the volume of finished goods called for

by the production budget. What constitutes finished stock in a particular business depends upon the character of the product. The finished stock of the X Foundry Company becomes the raw material of the Modern School Desk Manufacturing Company. The lumber, as it comes from the mill, may be the finished stock of the lumber company. Materials are either (1) raw materials, (2) goods in process, or (3) finished stock, depending upon the classification of a particular company where the only test must be that finished stock is stock in the form demanded by customers.

Finished stock may be produced from raw materials or assembled from parts; or purchased as finished stock. The present discussion is confined to the finished stock produced in the factory.

Although it is not the function of the budgetary program to prescribe the method by which production is carried on, since this is the province of the Planning Department, it is necessary for effective production control that a budget be prepared for each of the elements of production cost—materials, labor, and overhead—to the end:

1. That the necessary amount of materials and labor will be available and excess amounts will be prevented.

2. That the cost of materials, labor, and overhead shall be under effective control.

3. That the cost of financing the production program may be determined for the purpose of the financial budget.

IX

After the production department has estimated its finished goods requirements, it should prepare estimates of the cost of labor and manufacturing expenses, covering the estimated volume of finished goods. Both of these estimates should preferably show costs

by departments and should compare the estimated expenditures for the current period with the actual expenditures of past periods. Assuming that the budget period is for three months, the form on which the estimate is drawn up may show the following columnar headings:

1. Department
2. Amount last period
3. Average amount last four periods
4. Estimated amount for present period
5. Distribution
 - (a) First month
 - (b) Second month
 - (c) Third month

If the estimate is prepared in this form it will be possible for the executives responsible for its final approval to determine whether the current estimates are in excess of past expenditures, and, if so, the cause for the increase. If this increase is deemed unjustifiable, the estimate can be revised accordingly. The value of the monthly distribution to the treasurer in the preparation of his cash budget should be evident.

It may be desirable to show an analysis of the expenses of each department, in which case the Production Department will employ such an analysis in making up its departmental estimates.

X

If the company employs a general purchasing agent, it will be his responsibility to prepare an estimate of raw material purchases. When the Production Department has prepared its estimate of finished goods requirements, it will transmit a copy to the purchasing agent who will estimate the cost of the raw materials needed to make the finished goods. The materials estimate should be submitted for approval on a form which provides the following columnar headings:

1. Item
2. First month
 - (a) Inventory beginning
 - (b) Estimated purchases
 - (c) Estimated inventory at end
 - (d) Estimated disbursements for purchases of previous months
 - (e) Estimated disbursements for purchases of the current month
3. Second month
 - (a) Inventory beginning
 - (b) Estimated purchases
 - (c) Estimated inventory at end
 - (d) Estimated disbursements for purchases of previous months
 - (e) Estimated disbursements for purchases of the current month
4. Third month
 - (a) Inventory beginning
 - (b) Estimated purchases
 - (c) Estimated inventory at end
 - (d) Estimated disbursements for purchases of previous months
 - (e) Estimated disbursements for purchases of the current month

If the estimate is prepared in this form, it will be possible for the executive responsible for its final approval to exercise an effective check on purchases. If the estimate provides for an increase in inventory, he can request an explanation and refuse the increase if he deems it expedient to do so. The value of the monthly distribution of disbursements to the treasurer in the preparation of his cash budget should be apparent.

XI

After the materials estimate has been approved and the purchasing agent receives his budget for the period, it is necessary for him to plan for its enforcement in the same manner that the Production Department must plan to enforce its finished goods budget. In special cases large purchases are

permissible because of special prices obtained as a result of the quantity bought or because of the saving in freight or the desirability of avoiding future delays in delivery. But as a rule the problem of the purchasing agent is to schedule deliveries of raw materials so that a sufficient amount of materials will be on hand at all times to meet production needs, and yet to prevent an excess of inventory with the consequent loss on the capital invested. In order to accomplish this, it is necessary to set up schedules of the inventory of materials to be maintained and of deliveries to maintain the inventory schedule.

To carry out these schedules it is necessary to set up maxima, minima, and quantities to order in the same manner as for finished goods, and to keep a balance of stores record for raw materials which will make possible an enforcement of these requirements. The factors which must be considered in exercising control over inventory of raw materials differ but little from those which control the finished goods inventory. The production period becomes the purchasing period or the length of time between the sending of the purchase order and the receipt of the goods. Instead of considering probable sales, it is necessary to consider probable factory requisitions for materials. Instead of considering the economical run, it is necessary to consider the economical quantity to purchase with reference to terms, price, and deliveries.

The method of establishing control of the raw materials inventory should be apparent in the light of the preceding explanation of the control of finished goods.

XII

From the foregoing discussion it should be evident that at least four

estimates must be made with reference to production:

1. The estimate of finished goods
2. The estimate of manufacturing expense
3. The estimate of labor
4. The estimate of materials

The first three of these estimates are prepared by the production department, while the fourth is prepared by the purchasing agent. The estimates should be submitted to the executive authority to be considered in connection with the sales estimate, the financial estimates, and all the other estimates of the business. After such revisions as are deemed necessary, they are approved and then become the production budget for the next budget period.

When special orders are received for goods not carried in stock, the problem of production control is somewhat different from that of the business which manufactures for stock on standard orders. In the case of the business which manufactures both standard and special orders, it is necessary to make a careful analysis of past sales to show the trend of special orders by years and by territories, and to study the effect of market conditions on their number. The policy to be followed in handling special orders—whether they are to be given right of way or used only to take up unused time—will have a considerable bearing on the planning for their control.

XIII

Whether a business manufactures only partly, or entirely, on special orders, after the estimate of production is determined, the next step is the preparation of the three supplementary estimates of labor, manufacturing expense, and materials, in the same manner as those previously discussed. It

can be seen, therefore, that the chief difference between the production budget for a business producing for stock, and the one producing on special orders, is that the latter does not involve the problem of finished stock control.

XIV

In order to exercise control over the production budget and to make revisions when necessary, monthly reports are required on each of the four estimates included in the budget, showing a comparison between the estimated and the actual performance.

The report on the estimate of finished stock may have the following columnar headings:

1. Item
2. Estimated sales for month
3. Production quota for month
4. Actual sales for month
5. Revised quota
6. Delivered to stock during the month
7. Balance in quota not delivered; or excess of amount delivered over quota
8. Orders outstanding under quota not delivered
9. Balance in quota not ordered; or excess of ordered over quota

The amounts given for each item or line of goods, in column 2, will be taken from the last revision of the sales estimate. Column 3 shows the estimated quota for finished goods based on the estimated sales shown in column 2. Column 4 shows the actual sales for the month, and column 5 shows the revised finished goods quota, the revision being based on the actual sales as shown in column 4. Column 6 shows the actual deliveries of finished goods to stock. Columns 2 and 4 compare estimated with actual sales, columns 3 and 6 compare estimated with actual production for the month, and columns 5 and 6 compare the actual production with the revised production quota. A

comparison of columns 3, 5, and 6 will show two things: (1) how much the original estimate of production was incorrect; and (2) how much the actual production varied from the estimated. The information shown in column 4 is taken from the sales records for the month, and the information in column 6 from the balance of stores records. Column 7 shows the difference between columns 5 and 6. Column 8 shows the manufacturing orders outstanding in the factory at the end of the month, as shown by the records of the Planning Department and also on the balance of stores records. Column 9 shows the amount by which the production budget for the next month should be revised.

XV

If a monthly quota system is maintained on stock deliveries, the unfilled orders at the end of the month, as shown by this report, furnish useful data for production control. A large amount of unfilled orders usually indicates poor production management. In some cases the unfilled orders may be due to traffic mismanagement, to poor warehouse control and operation, to general trade depression, or to strikes and similar causes. In each case the data given in the report as to outstanding unfilled orders present material for executive judgment, executive orders, and executive discipline and control. Such a budget and reporting system makes use of sales, inventory, and production accounts as a basis for future plans. The reports under such a system offer comparisons between estimated sales and estimated production, and actual sales and actual production. Such reporting makes constant use of accounts, and the requirements of the reports to be made determine what grouping of

sales accounts should be followed. Similarly, reporting requirements indicate the analysis to be followed in classifying inventory accounts and cost sheets.

Every executive has his own particular interest in the monthly report of delivered and undelivered orders under the monthly quota. The officer in charge of the employment of labor studies the outstanding orders and quota balances with reference to labor that may be needed in meeting rush deliveries into stock. The traffic manager is vitally interested in outstanding orders since the amount for a given item may or may not indicate the necessity for action as to terminal facilities, warehousing, reloading, demurrage, and the like. The advertising manager notes with concern the balances in quotas for which orders have not been placed since such balances may indicate a departure from advertised promises of service. Or the monthly report may show production in excess of quotas and may indicate to the sales manager the necessity for extra efforts to move the surplus inventory. Of course the treasurer is interested in the amount of outstanding orders and the problem of financing their completion.

XVI

The monthly report discussed in the foregoing paragraphs furnishes the basis for immediate management decisions. It also provides a progressive month-by-month commentary on the accuracy of the estimating and planning in the business. Such monthly reports reveal errors in business judgment and make for better estimating for the next budget period.

Considerable space has been devoted to a consideration of the preparation and use of the monthly report on the production of finished stock. Although

this report is the one most widely used, it is of equal importance to have control reports on manufacturing expenses, labor, and materials. It should be apparent that since labor, manufacturing expenses, and materials are the elements from which the finished goods are produced, their control is essential if proper control is to be exercised over the finished goods inventory.

The monthly report on both manufacturing expenses and labor may contain the following columnar headings:

1. Department
2. Estimated production
3. Actual production
4. Per cent of increase or decrease
5. Estimated cost (labor or manufacturing expense)
6. Actual cost (labor or manufacturing expense)
7. Per cent of increase or decrease
8. Ratio of estimated cost of labor or manufacturing expense to estimated production
9. Ratio of actual cost of labor or manufacturing expense to actual production
10. Ratio of cost of labor and manufacturing expense to production during the last four periods

The purpose and value of the information shown in each column of this report should be evident. If properly studied and used, it will provide a very effective control over the expenditures for labor and manufacturing expenses.

The monthly report on the purchases of materials may show the following columnar headings:

1. Item
2. Estimated purchases
3. Actual purchases
4. Per cent of increase or decrease
5. Estimated inventory
6. Actual inventory
7. Per cent of increase or decrease
8. Comments

The purpose and value of the information shown in each column of this

report should be evident. The executives should study this report in the light of the production for the month compared with the estimated production. They should also give consideration to the comments shown in column 8, since there may be special considerations which have brought about a deviation from the materials budgets. Such deviations should be made as a general rule, however, only in response to executive direction or permission. By a study of this report it will be possible to make such revisions as are necessary in the materials budget for the remainder of the budget period.

It is evident that the treasurer will want, in addition to the foregoing report, a report which will show the disbursements for materials during the month compared with the estimated disbursements for the month.

XVII

The preceding description of the procedure in the preparation and execution of the production budget may be outlined and summarized as follows:

I. PREPARATION OF SALES BUDGET

1. Estimates prepared by sales units.
2. Revised by General Sales Office.
3. Revised by the Production Department in the light of production possibilities.
4. Final revision and approval by the chief executive of the business.

II. PREPARATION OF PRODUCTION BUDGET

1. Finished Goods Budget
 - (a) Estimate of finished goods requirements prepared from the sales budget by the Production Department.
 - (b) Revision and approval of finished goods estimate by executive head of the business.
 - (c) Enforcement of this estimate through the means of the balance of stores records operated under maximum and minimum standards.

2. Labor Budget and Manufacturing Expense Budget

- (a) Estimate of labor cost and manufacturing expense cost prepared from the finished goods budget by the Production Department.
- (b) Revision and approval of these estimates by the chief executive of the business.
- (c) Enforcement of Labor and Manufacturing Expense Budgets by the Production Department through the agency of a centralized production control system.

3. The Materials Budget

- (a) Prepared by the General Purchasing Agent from the finished goods budget.
- (b) Revised and approved by the chief executive of the business.
- (c) Enforcement of materials budget through the means of the materials balance of stores records operated under maximum and minimum standards.

III. MONTHLY REPORTS FOR CONTROL AND REVISION OF BUDGETS

1. Report on Finished Stock Budget

- (a) Items.
- (b) Estimated sales for month.
- (c) Production quota for month.
- (d) Actual sales for month.
- (e) Revised quota.
- (f) Delivered to stock during the month.
- (g) Balance in quota not delivered; or excess of amount delivered over quota.
- (h) Orders outstanding under quota not delivered.
- (i) Balance in quota not ordered; or excess of ordered over quota.

2. Report on Labor and Manufacturing Expense Budget

- (a) Department.
- (b) Estimated production.
- (c) Actual production.

- (d) Per cent of increase or decrease.
- (e) Estimated cost (labor or manufacturing expense).
- (f) Actual cost (labor or manufacturing expense).
- (g) Per cent of increase or decrease.
- (h) Ratio of estimated cost of labor or manufacturing expense to estimated production.
- (i) Ratio of actual cost of labor or manufacturing expense to actual production.
- (j) Ratio of cost of labor and manufacturing expense to production during the last four periods.

3. Report on Materials Budget

- (a) Item.
- (b) Estimated purchases.
- (c) Actual purchases.
- (d) Per cent of increase or decrease.
- (e) Estimated inventory.
- (f) Actual inventory.
- (g) Per cent of increase or decrease.
- (h) Comments.

IV. MONTHLY REVISION OF BUDGETS

1. Executive head¹ of business receives monthly reports on all departmental estimates including those outlined under "3."
2. Considers these reports with reference to their relation to each other and makes such revisions as deemed necessary.
3. Any revisions made in the production budget will be communicated to the production department. If the materials budget is revised, this revision will be communicated to the Purchasing Agent.

¹ Throughout this discussion the executive head of the business is deemed to have the final decision on all estimates. In many cases the executive head delegates the revision of departmental estimates to a committee composed of the Departmental Heads of the business. The organization for budgetary control will be discussed in a subsequent article. For the present the executive head of the business may be regarded as invested with the final authority on all budgetary matters.

ACCOUNTING IN DECEDENTS' ESTATES

BY HAROLD DUDLEY GREELEY*

ARTICLE II—SYSTEM OF ACCOUNTS

IN the preceding issue a general introduction to the subject of estate accounting was given, consisting of a description of the procedure in the administration of estates, together with definitions of the usual terms and phrases found in estate practice. It was pointed out that an executor should prepare an inventory of all the personal property of the estate, collect and conserve that property as the estate assets, pay the administration and funeral expenses and debts owed by the testator, and then distribute any balance of the property remaining in his hands in accordance with the terms of the will; that he must then account to the court which appointed him showing what cash and property he had received, the disposition made of it, and the balance, if any, remaining on hand. The court then orders the executor to retain the amount of his commissions, together with a sum fixed to reimburse him for the cost of the accounting, and to distribute the remaining cash and other estate assets in accordance with the directions stated in the court's decree.

In order that the executor at the close of his administration may be able to render an accurate account of his transactions, he must keep current records. Without such records any accounting presented by him will be more or less approximate, and while an approximate account which has the semblance of being exact would prob-

ably be accepted in the absence of definite objection, such an account would not withstand a vigorous attack by a party in interest whose rights were not observed in its preparation. A faulty accounting might result in a surcharge against the executor personally, involving him in a loss due perhaps solely to his carelessness in recording his current transactions or to his inability to remember the details with sufficient accuracy to enable him to prepare a true account.

The law does not prescribe any form of estate bookkeeping; in fact, as a rule, it does not prescribe any definite form of account or report to be rendered at the end of the administration. Nevertheless, courts have held that where an executor fails to keep current books, or keeps them in such manner that it is impossible readily to prepare a final accounting, the executor may be charged personally with the expense of preparing it. Incidentally, an executor might be called upon under unusual circumstances to explain transactions even after his accounts have been said to be judicially settled. In that event he is in an unfortunate position if his current records are so kept that he cannot understand them or find in them an accurate statement of the transactions. Consequently, it is desirable that the executor keep his current accounts in a way that will enable him to prepare his final accounting without difficulty and at the same time to handle his current work without unnecessary labor.

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Few articles and fewer books have been written on the subject of estate accounting, for the reason that an executor is generally supposed to require only an ordinary set of double-entry books kept in the usual commercial form. Sometimes not even this requirement is exacted, and the executor is told that he need keep only memoranda showing the assets received and the disposition made of them, together with a complete statement of his cash collections and payments. Most of the writing which has been prepared on this subject from the accountant's point of view concerns itself with the preparation of the final accounting. This naturally follows from the fact that the accountant is usually called upon in connection with the administration of estates only at their termination, when his assistance in the preparation of the executor's account or report to the court of his appointment is needed.

The late Dr. Charles E. Sprague in his work on the "Philosophy of Accounts" states in Section 366:

The accounts should be kept with constant reference to the statement to be made to the court; and it is very desirable that each schedule should be represented by an account on the books of the fiduciary; the name of the schedule may form part of its title.

That is to say, Dr. Sprague, who had in mind the rather elaborate form of accounting to be prepared for New York surrogates, consisting of a summary and supporting schedules, proposed a current account for each schedule required on the final accounting. This idea has been adopted by many publishers of forms and stationery from whom account books can be secured. Some of these books, it is claimed, may be kept currently by the executor and turned into the surrogate as the final accounting itself, the neces-

sary summary forming part of the account book. This procedure is not recommended for the very good reason that the executor should not part with his books of account. If they should become lost or destroyed he would be without means of verifying his transactions, should he later be called upon to do so in any proceeding. Further, it is doubtful whether the court would receive such a book as the account to be filed.

II

A system of bookkeeping based wholly upon the form of the final account gives the figures required for the final schedules in the trial balance of the estate ledger at the close of the administration. Inasmuch, however, as it is usually desirable to classify the items contained in these schedules otherwise than simply according to chronological order, even this system would not completely prepare the executor to make his final account in a complicated case, but would necessitate analyses of the individual schedule accounts. In a comparatively small estate where the New York or a similar form of account is required, this system might be useful, but where the form of account is not generally accepted as a matter of usage, or where the estate transactions are numerous, it is believed that the system of bookkeeping described below will give a more convenient arrangement of figures at the close of the administration than one which follows too closely the form of the final account.

While no form of account is prescribed by statute in New York, a form has, nevertheless, been more or less generally adopted through usage, and it is this form which the author of "Philosophy of Accounts" had in

mind. In a later issue the preparation of the final accounting will be considered in detail, but it is thought advisable to give the form at this point in order that what may be called the

final objective of the executor may be kept in mind throughout the discussion of the current matters in his administration. The following is the customary form of the final accounting:

BLANK COUNTY SURROGATE'S COURT

In the matter of the Petition of	} Account of Proceedings
.....	
to render and settle.....	
account as.....of	
..... Deceased	}

TO THE SURROGATE'S COURT OF THE COUNTY OF BLANK:

.....
do render the following account of.....proceedings as.....
of.....deceased: On the.....day of.....A.D. 192
Letters.....were duly issued to..... On the.....day of.....
A.D. 192,.....caused an inventory of the personal estate of the deceased to be
filed in this office, which personal estate therein set forth amounts, by appraisement by
the appraisers duly appointed, to \$.....

SCHEDULE A, hereunto annexed, contains an itemized statement of all the property contained in said inventory, or which has come into.....possession since the making of such inventory, also a statement of the property sold by.....at public or private sale, with the prices and manner of sale; which sales were fairly made by.....at the best prices that could then be had, with due diligence, as.....then believed. It also contains a statement of all the debts due the said estate and mentioned in said inventory, which have been collected, and also of all interest or moneys received by.....for which.....legally accountable.

SCHEDULE B, hereunto annexed, contains a statement of all debts in said inventory mentioned, not collected or collectible by....., together with the reasons why the same have not been collected and are not collectible; and also a statement of the articles of personal property mentioned in said inventory remaining unsold, and the reasons of the same being unsold, and their appraised value; also a statement of all property mentioned therein which has been lost by accident, without any wilful default or negligence, the cause of its loss and its appraised value. No other assets than those in said inventory, or herein set forth, have come to.....possession or knowledge, and all the increase and decrease in the value of any assets of said deceased is allowed or charged in said Schedules A and B.

SCHEDULE C, hereunto annexed, contains a statement of all moneys paid by.....for funeral and other necessary expenses for said estate, together with the reasons and object of such expenditures.

On or about the.....day of.....A.D. 192.....
caused a notice for claimants to present their claims against the said estate to.....
within the period fixed by law, and at a certain place therein specified, to be published according to law, for six months pursuant to an order of the Surrogate of the County of Blank, due proof of publication herewith filed,.....refer to as part of this account.

SCHEDULE D, hereunto annexed, contains a statement of all the claims of creditors presented to and allowed by.....or disputed by.....and for which judgment or decree has been rendered against.....together with the names of the claimants,

the general nature of each claim, its amount, and the time of the rendition of the judgment; it also contains a statement of all moneys paid by.....to the creditors of the deceased, and their names, and the times of such payments.

SCHEDULE E, hereunto annexed, contains a statement of all moneys paid to the legatees, widow or next of kin of the deceased.

SCHEDULE F, hereunto annexed, contains, so far as they can be ascertained with due diligence, the names and post-office addresses of all persons interested in this proceeding who are required to be cited, or concerning whom the Court is required to have information, to the best of knowledge, information, and belief.

SCHEDULE G, hereunto annexed, contains a statement of all other facts affecting administration of said estate, right, and those of others interested therein.

charge.....as follows:

With amount of Schedule A,.....\$.....

“ Increase, as shown by Schedule A.

credit.....as follows:

With Amount of Loss on Sales, as per Schedule B,.....\$.....

“ Debts not collected as per Schedule B,.....

“ Schedule C,.....

“ Schedule D,.....

“ Schedule E,.....

Leaving a balance of.....\$.....

to be distributed to those entitled thereto, subject to the deductions of the amount ofcommissions and the expenses of this accounting. The said Schedules, which are severally signed by.....are part of this account.

In the system of bookkeeping proposed in “Philosophy of Accounts,” to which reference was made in a preceding paragraph, in addition to accounts for Inventory and Estate, various accounts were suggested which correspond to the schedules required in the New York form, although different letters are given to the schedules. The following accounts were proposed:

Schedule A—Increases over Appraised Value of Assets

Schedule B—Assets Not in the Inventory

Schedule C—Income

Schedule D—Decreases on Appraised Value of Assets

Schedule E—Funeral Charges and Testamentary Expenses

Schedule F—Debts and Claims

Schedule G—Payments to Legatees

Schedule H—Expenses of Administration

It will be seen that while these schedule letters do not coincide with the schedules called for in the account, the schedule accounts themselves furnish the data which would be required in preparing the account. The opening entry in this system is a debit to Inventory and a credit to Estate, followed by a debit to Cash and a credit to Inventory to open a separate cash account. When assets are sold Cash is debited and Inventory credited, and when any transaction occurs affecting any of the enumerated schedules, the appropriate schedule account is debited or credited as the case may require.

In place of the system outlined above, it is believed that a double-entry system following the general outline now to be given and utilizing the books of account specified and described

below, will prove practicable in large estates, without being too cumbersome for use in small estates.

III

At the beginning of the administration the estate assets are debited to accounts with appropriate titles, each asset or group of assets having one account. For example, there should be an account with each bond and mortgage, with each kind of capital stock held as an estate asset, with each bank deposit, and with each principal kind of personal property, such as library, jewelry, furniture, clothing, and the like. The total credit to offset these debits should be to Estate. This credit will represent the total principal of the estate. Subsequent receipts by the executor of property or cash are debited to the proper asset account. Receipts from the sale of assets recorded on the books are credited to the accounts of the assets sold; receipts which represent assets existing at the time of death, but which for some reason were not recorded on the books, are credited to Estate. The latter kind of receipt, for example, might cover an asset discovered after the books have been opened. Receipts on account of income earned by the estate assets during the administration are credited to Income.

Payments of cash or distributions of assets made by the executor are credited to the proper asset accounts. Payments on account of expenses are debited to an account entitled "Expense Principal," if the expenses are to be borne by the persons entitled to the principal of the estate; or to an account entitled "Expense Income," if they are to be borne by those entitled to the income. As noted in the preceding instalment, the debts of the testator are not as a rule recorded on the books

as estate liabilities, but payments on account of them are charged as made to an account entitled "Debts of Testator." Payments or distributions to legatees are charged to accounts with the legatees. At the close of the administration the nominal accounts are closed into Estate and Income and the credit balances in those accounts are distributed among the legatees' accounts, each legatee being credited with the amount of his legacy.

There should be no difference of opinion as to the advisability of keeping separate sets of books where one person is both executor and trustee. One writer, however, has prescribed a two-column cash book for the purpose of separating executor's cash and trustee's cash, and has said that "it is useless trouble for the executor to keep a separate set of books for the trusteeship." In view of the facts that the utmost care should be exercised to preserve intact the trust fund and to keep distinct the trust transactions, and that usually the executorship is concluded before any substantial transactions on account of the trusteeship occur, it would seem advisable in every case to operate a separate set of books for the trusteeship even though that might necessitate the running of two sets of books during part of the time.

IV

The books required to operate the system of accounts proposed are a journal, a specially ruled cash book, and a ledger. These books will be described and the principal uses of them outlined in this section.

The journal may be an ordinary two-column one such as is used commercially. The most distinctive feature proposed in connection with the use of the journal is the inclusion in it of memorandum entries, thus making

it a sort of diary. It is advisable for the executor to keep a diary, recording in it the details of all important transactions so that if his conduct be questioned at any time he will have readily available sufficient memoranda to refresh his memory. Ordinarily such memoranda can conveniently be kept in the journal, and thus the keeping of a separate diary can be obviated. Care should be taken, however, in such memorandum entries to state facts rather than conclusions and where possible to give exact references to extraneous documents and files, for example, the folios of public records of estate documents. This latter practice requires very little effort and will save considerable time if it should be necessary to consult the public records or to give references by book and page to the records of the fundamental documents.

The first memorandum entry in the journal should give the exact date of death. The next memorandum entry might be expected to refer to the reading of the will and to recite specifically the steps which the person named as executor took before his appointment to that office. For example, it might recite that he notified the life insurance companies in which the decedent left policies. This journal-diary should also show when and from whom the person named as executor obtained the will. This is of evidential value because frequently more than one will is discovered and it sometimes becomes difficult to determine which was the last authentic one, particularly when two or more of them bear the same date.

If the will was secured from a trust company or bank, the person named as executor should recite the steps taken to get possession of it. He might note also in the journal all facts concerning his employment of counsel giving the

name and address of the attorney, a statement of his agreement with the attorney concerning compensation, and a word or two as to his reason for engaging the particular attorney whom he secured. In cases where the heirs and next of kin are unknown to the person named as executor, he should make a notation in his journal of the steps taken to locate them and to get the other information required to be contained in the petition for admission to probate. As soon as he learns the names of the heirs and next of kin, he should note those names in the journal specifying the sources of his information.

If the person named as executor before the issuance of his letters testamentary secures property or assets of the estate, or if he acquires control over or information concerning property or assets without actually securing them, he should note in his journal precisely what property or assets are involved and just what he did with them prior to his appointment as executor. If he opens a bank account prior to his appointment, he should note that fact giving the name of the bank and stating that the account was opened in the name of the estate, the bank agreeing to transfer to this new account the balance then standing on its books to the credit of the decedent, upon being served with a certified copy of the letters testamentary. A memorandum entry in the journal should be made also to show the date of the filing of a petition for the admission of the will to probate.

After the will has been admitted to probate and letters testamentary have been issued, a memorandum entry should note these facts and should give exact references to the public records where the documents are recorded; for example,

Will recorded	L. 869, p. 201.
Decree recorded	L. 184, p. 162.
Letters recorded	L. 297, p. 172.
Bond recorded	L. 442, p. 185.

A memorandum entry should be made reciting the appointment of appraisers for the inventory and the sending of due notices to the parties in interest. A similar record should also be made showing the appointment of the transfer tax appraiser (if any) and all steps taken in connection with his appointment and with the appraisal. Where property is not believed to be taxable, the record should show what steps were taken to have it exempted and should state whether or not exemption was allowed.

A notation should be made in the journal showing the signing of the court order directing the executor to advertise for creditors and the insertion by the executor of the advertisement. This notation should give the name of the newspaper and the dates of publication. In this connection it is convenient to cut out of the newspaper the actual advertisement and to paste it into the journal. The usual form of advertisement is as follows:

NOTICE TO CREDITORS

Pursuant to an order of Hon. John Smith, Surrogate of the County of Blank, notice is hereby given to all persons having claims against Adam Johnson, late of Latonia in said County, deceased, to present the same with vouchers thereof to the subscriber at his place of transacting such business, namely, 1000 Broadway, New York City, on or before the 1st day of May next.

JOSEPH GILMORE, *Executor*

Dated, September 1, 1919.

It is a good plan also to paste under the notice a copy of the affidavit of publication, the original affidavit usually being filed with the executor's accounting at the end of his administration,

The first financial transaction to be recorded in the journal concerns the setting up of ledger accounts for the assets shown by the inventory. Thereafter the financial transactions to be entered in the journal are generally confined to those with inactive bank accounts, deposits in which are not carried as part of the current estate cash; to record assets discovered after the preparation of the inventory; to record profits and losses on the sale of estate assets; to record unusual losses; to charge legatees with the payment of inheritance taxes, the total of which may have been charged in the first instance to an Inheritance Tax Suspense account as explained below; to charge them with distributions of estate assets; and to close the nominal accounts at the end of the administration.

A specially ruled cash book will be found convenient, and the following form is suggested:

On the receipt side of the cash book the columns for date, folio, account to be credited, and particulars, require no explanation except that the last should show all the particulars which it may be desired at any time to know. The net cash column should show all of the cash receipts which form part of the general cash belonging to the estate carried in the checking account. If more than one checking account is used, it would be advisable to have a net cash column for each bank on both sides of the cash book. The column headed "Income" is to record cash receipts applicable to income. As will be explained in a subsequent issue, these receipts consist in part of prorated portions of interest collections part of which had accrued prior to the date of death and part subsequently thereto. It includes, in a word, all the portions of the cash collections to be credited to the persons entitled to

CASH RECEIPTS

Date	Fol.	Account to be Credited	Particulars	Net Cash	Income	Realization of Assets		Sundries
						Gain	Loss	

CASH PAYMENTS

Date	Check No.	Vouch. No.	Fol.	Account to be Debited	Particulars	Net Cash	Expense		Debts of Tes- tator	Sun- dries
							Prin- cipal	Income		

the income of the estate. The two columns showing respectively the gain and loss on realization of assets, combine a journal function with the cash book. They are convenient in the cash book because they enable the executor to record the collection of an inventoried asset in a way to show its book value, its cash collected value, and the resulting difference as a gain or loss. The last column headed "Sundries" is to contain all items to be credited individually to accounts in the ledger.

On the payments side of the cash book the columns for the date, check number, folio, account to be debited, and particulars, require no comment. The column for the voucher number should contain the number for each voucher to be submitted by the executor to support the final account. The preparation of these vouchers will be discussed in a subsequent issue. If desired, the numbering of these vouchers may be deferred until the prepara-

tion of the account, but when they are numbered the respective numbers should be inserted in the cash book. It will usually be found convenient, however, to start the preparation of vouchers at the beginning of the administration in order to lessen the work at the time of preparing the account. The net cash column should contain the amount of each payment made by the executor out of the checking account of the estate. The columns for expense principal and expense income contain the items to be charged to those accounts in total at the end of the administration or at the end of any fiscal period adopted by the executor, as, for example, a fiscal period ending with the preparation of an intermediate account to which reference will be made in a subsequent issue. The column for debts of testator should contain all payments made for such debts, the total of this column being posted at the same time as the totals of the two preceding columns.

The last column for sundries is to contain all items to be debited individually to ledger accounts.

The cash book should record only the active or checking bank account so as to show the funds available for current use; all inactive deposits, such as those in trust companies and savings banks, should be represented on the ledger by separate accounts. Where a current cash account is opened prior to the issue of letters testamentary and in advance of the executor's right to draw checks on the account, the cash book should be opened at the time of the first deposit, the first line on the receipts side being left blank in order that the cash on hand as of the date of death may be entered as soon as the amount is determined by the inventory.

The ledger of the estate may be an ordinary double-entry ledger without special ruling. It is generally advisable to have this ledger a bound book, and in most estates it may be a fairly small one. If there are numerous accounts receivable or numerous investments, subsidiary ledgers may be used in any form convenient to fit the circumstances of the particular case, with controlling accounts in the general ledger of the estate.

V

In this instalment it has been pointed out that it is absolutely necessary to keep a strict and accurate account of all property or assets received and paid out or delivered, with vouch-

ers in support of payments and receipts to show the actual delivery of other estate assets. In a subsequent issue the details concerning the preparation and preservation of vouchers will be considered.

While no particular form of estate bookkeeping is prescribed by law, an adequate system should be adopted to fit the needs of each individual case. The system suggested in this issue is sufficiently simple to be practicable for small estates, provided the person operating it has a fair notion of double-entry bookkeeping. This system can readily be extended to fit the needs of large estates, and, of course, it should be supplemented by memorandum records showing, for example, the time when payments for rents, interest, and the like, are due. For an executor who does not understand double-entry bookkeeping, no system which could be explained would be adequate, because in these publications there would scarcely be an opportunity for explaining the science of double-entry bookkeeping. A person without a knowledge of bookkeeping will find it advisable to secure the assistance of a bookkeeper in making his current records, if the estate is a small one. If the estate is large, the employment of counsel should include an accountant in addition to the attorney. The employment of counsel, both legal and accounting, will almost invariably be found to be a wise investment for the protection of both the executor and the persons interested in the distribution of the estate.

READJUSTMENT RELIEF PROVISIONS OF THE 1918 REVENUE ACT

BY FRANK LOWSON*

THE marshalling of the country's resources for war purposes necessarily had to be effected by an unprecedented expansion of its productive capacity. To accumulate vast stores of commodities of all sorts sufficient to meet any and all demands which might be made on them was not only a necessity but the failure to do so would have constituted criminal negligence. The end of the war found the country with immense quantities of merchandise on hand, with uncompleted contracts for large additional quantities, and a productive organization and capacity which could not be immediately, nor at any time without loss, brought down to a normal condition.

These were the conditions of the country's business which confronted the legislators who framed the 1918 Revenue Act. Not to have taken cognizance of these conditions would have laid them open to a charge of being negligent of their country's welfare. In framing the law, therefore, some provision was made for taking care of the losses which seemed inevitable. Sections 204 and 234 (a-14) were incorporated and constitute the provision made for handling what are known as net loss and inventory loss respectively. The relief granted hereunder was hedged about by such limitations that only to a very limited extent has there been an appreciable enjoyment of it. The business readjustment period was delayed beyond the time expected and contemplated by the

relief provisions of the law, so that it has not been possible to secure the benefit of the obvious intent of the law. Only the business men of the country know the hardship and, in many instances, the disaster which this has occasioned.

In view of the general dissatisfaction with the results accomplished under the net loss and inventory loss relief sections of the 1918 Revenue Act and in view of the urgent necessity and demand for their amendment and re-enactment, the following contribution to the discussion is now offered in order to clarify their meaning and aid in their re-enactment so as to grant the relief required to safely weather the storm of the slump in values past, present, and future.

The so-called relief provisions of the 1918 Revenue Act, viz., the net loss provision, Section 204, and the inventory loss provision, Section 234 (a-14), are apparently doomed to provide the "least possible relief" to the taxpayers instead of the "greatest possible relief" as intended by Congress, unless either the Bureau of Internal Revenue reverses the decisions hitherto made under these sections, or Congress amends these sections.

The reasons for this state of matters are:

1. That a serious error was made by the Sixty-fifth Congress when making some last minute changes on Section 204, whereby that section was worded so that it does not express the true intention of Congress as will hereafter be explained.

2. That the Bureau of Internal Revenue and the Attorney-General have decided

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that the Bureau has no power to permit a corporation after the act was passed to change the date of its fiscal year, so as to get the benefit of Section 204, when as a matter of fact many corporations could not possibly get that benefit without such permission.

3. That the Bureau of Internal Revenue has erroneously interpreted the inventory loss provision to mean that only a substantial *net* loss on the 1918 inventory as a whole will be allowed as a proper claim, when as a matter of fact the section reads "a substantial loss," *i.e.*, gross loss, and most of the evidence available clearly indicates that it does not mean a substantial *net* loss, as will hereafter be shown.

The result of these conditions is that gross injustice is being done to not a few taxpayers. The remedy for this injustice is largely within the power of the Bureau to supply. What little relief the Bureau cannot supply the Sixty-sixth Congress could have supplied, but failed to do so, notwithstanding the recommendation of the Secretary of the Treasury to the Ways and Means Committee of the House to provide for such remedy in part.

The reasons for these conclusions will be found later in this article.

II

Congress anticipated that prices would fall to lower levels after the armistice, November 11, 1918, and as a consequence that considerable losses would be sustained in 1919. Congress decided that some of these losses should be taken into consideration in arriving at the taxable income of 1918, so that the taxpayer would either get an 82.4 per cent tax credit on such losses for 1918 instead of a 46 per cent tax credit for 1919, or as the respective rates on the 1918 and 1919 returns would show.

The net loss provision, Section 204, was the first relief section. In part it provided that:

1. A net loss sustained in the year 1919 on the realization of war plant and facilities could be deducted from the 1918 net income and the taxpayer would pay taxes at the 1918 rates on the 1918 net income so reduced.

2. A net loss for the year 1919 sustained on the operation of a taxpayer's regular business could be deducted from the 1918 net income, and the taxpayer would pay taxes at the 1918 rates on the net income of the two years combined.

By transferring a 1919 net loss on war plant and facilities back to 1918, a taxpayer would of course either reduce a net loss on his whole operations, or he might change that net loss into a net profit for 1919. In any event, it is clear that a taxpayer could not claim twice for the same net loss. If the war plant net loss is greater than the "operating" net loss, the war plant net loss is the total amount that could be allowed as a reduction of the 1918 net income.

After the net loss provision, Section 204, had been discussed, it was decided that it did not go far enough to provide relief, and the second relief section, *viz.*, Section 234 (a-14), inventory loss provision, was added to provide for "many cases where relief is needed where there is no *net* loss. The great majority of cases will be of that character." (Senator Simmons.)

Under the inventory loss provision, a "substantial loss" sustained in 1919 on the realization of the 1918 inventory could, if it passed certain tests, be deducted from the 1918 net income and the taxpayer would receive a tax credit for 1918 either at an 82.4 per cent rate instead of receiving a credit for 1919 at a 46 per cent rate, or as the respective rates on the 1918 and 1919 returns would show.

No attempt will be made here to deal with all the complications or combinations of claims which might be made under these two relief provisions. The

most sensible conclusion is that if a claim allowed under the inventory loss provision changed a 1919 net loss on the whole business into a 1919 net profit, no claim could be made under Section 204 for a 1919 net loss on the whole business, because none would then exist. And any claim allowed under Section 234 (a-14) which affects the net loss on war plant and facilities would similarly reduce the claim under that part of Section 204.

III

In discussing the interpretation and administration of the inventory loss relief provision, we shall discuss first the Section 234 (a-14) and the erroneous interpretation of it adopted by the Bureau of Internal Revenue, because we believe that a proper and liberal interpretation of it would provide a remedy not only for the injustice of the Bureau's interpretation of Section 234 (a-14) but also for some of the defects in Section 204.

The difference of opinion between the Bureau of Internal Revenue and numerous taxpayers relates to the interpretation of the following words in Section 234 (a-14):

That he has sustained a substantial loss (whether or not realized by actual sale or other disposition) resulting from any material reduction (not due to temporary fluctuation) of the value of the Inventory for such taxable year (1918).

The Bureau of Internal Revenue decided that only a "substantial net loss" on the value of the whole inventory is a proper claim. The taxpayers are of opinion that a "substantial loss," *i. e.*, gross loss, on any part of the inventory is a proper claim if it passes the tests laid down by Congress.

The Bureau's decision is based on the theory that the net loss on the whole inventory was the "substantial"

loss intended by Congress. But the Bureau overlooked the fact that the section itself provides that a *loss* on any item caused by a *temporary fluctuation* of value *must be* excluded from such a claim. Now, if a net loss on the whole inventory can only be calculated by including in it such a "*temporary fluctuation*" loss, it is certain that Congress *did not intend* the words "substantial loss" to mean "substantial *net* loss on the whole inventory." There is much other good and sufficient evidence pointing to the same conclusion, some of which we shall refer to later.

Congress was called upon to provide immediate relief for losses sustained on the 1918 inventory so that the taxpayer could withhold from his March 15, 1919 payment an amount of 1918 taxes corresponding with the loss sustained on his 1918 inventory. Congress undoubtedly knew that in the great majority of cases it would be impossible at March 15, 1919, to calculate the "net loss" on a 1918 inventory as a whole and therefore chose another method of allowing relief. They adopted the method of dealing with losses on individual items on the inventory and by applying a series of tests they eliminated items of loss, either insignificant in amount or caused by temporary fluctuation of value or on which there had not taken place a material permanent reduction in value.

These tests can be designated as follows:

1. The reduction test
2. The temporary fluctuation test
3. The material test
4. The loss test
5. The substantial test

After these tests have all been applied and the necessary eliminations made item by item, there remains the permissible "losses" or total substantial loss which is a proper claim. That

was the only practical method which could be applied to meet the demand for immediate relief.

Two things must be proven in order to have a claim allowed, viz., that there is both: (1) a permanent material reduction of the value of the inventory, and (2) a substantial loss resulting therefrom.

The words "the value of the inventory" undoubtedly mean "cost or market value whichever is lower" or "cost," depending upon the principle on which the 1918 inventory was valued.

To apply the temporary fluctuation test to totals is practically impossible. It cannot be applied in any sensible manner to a total reduction which is composed of items one or more of which is caused by temporary fluctuation and one or more of which is caused by permanent fluctuation of value. If Congress intended that test to be applied to totals, Congress intended the impossible. It is therefore a fair assumption that Congress intended the only possible method of application thereof, viz., to each item on the inventory.

That assumption is fortified by the use of the word "any" before "reduction." Why did Congress use the word "any" before "reduction"? Why not have used the expression "a reduction"? The answer is that Congress used the word "any" to give the taxpayer a choice of items of reduction, viz., the material reductions, which again indicates that Congress was applying the tests to *items* on an inventory. Inasmuch as the temporary fluctuation test can only be applied to individual items of reduction, it was necessary, in order to be consistent, to apply the reduction test to items and therefore the word "any" was used before "material reduction."

If the word "a" had been used in

place of "any"—"a" material reduction of the value of the inventory could properly have been construed to mean the total material reduction. But why use the word "any" if the "total material reduction" was intended? Why use the word "any" if the test is to be applied to the total reduction only? The only satisfactory answer is that Congress intended the reduction test to be applied to items, the same as they intended the temporary fluctuation test to apply to items. The use of the word "any" here instead of "a" is strong support for the theory of "items" as against "totals."

Therefore we have two tests which were undoubtedly intended to be applied to each item. And let it be very carefully noted that these two are provided to test the originating cause of a claim, viz., a permanent reduction of values from the high war level. If any of the other tests are found to be more easily applied to totals than to items, the easier method of applying these other tests should not be allowed to control the method of application of the most important tests of the section, viz., those testing the originating cause of a claim. Nor should it be allowed undue weight in arriving at the general interpretation of the section, but rather should such general interpretation be arrived at after giving the greater weight to the method of application of the most important tests, which are those testing "the reduction" and "the temporary fluctuation."

The loss test must first be applied to items before it can be applied to totals. The "material" and "substantial" tests could be applied to totals without being applied to items. So we have the following results:

1. One test which it is impossible to apply to totals and must therefore be applied to items (temporary fluctuation test).

2. A second test (the reduction test) which must be applied to items before it can be applied to totals and which from the use of the word "any" it is clear that Congress intended should be applied to items.

3. A third test (the loss test) which must be applied to items before it can be applied to totals and which by analogy is in the same position as the reduction test.

4. Two tests, the "material" and "substantial" tests, which are more easily applied to totals, but which are quite possible and in many cases practicable of application to items.

Some support for the interpretation by the Bureau of Internal Revenue lies in the fact that the "substantial" and "material" tests can more easily be applied to totals than to individual items. But that fact should not be allowed unduly to influence the interpretation of the section in view of the other facts, viz.: (1) that one of the other tests cannot be applied to totals, and (2) that still two other tests must be applied to items first before they can be applied to totals.

IV

The words of Section 234 (a-14) are "that in computing net income there shall be allowed as a deduction . . . a substantial loss (whether or not actually realized by sale or other disposition) resulting from any material reduction (not due to temporary fluctuation) of the value of the inventory for such taxable year." The word "loss" in this section does not mean "*net loss*." The only qualifications the loss referred to must have in order to be deductible, are that it must be "substantial" and result from "any material reduction" of the value of the inventory. It may be true that the words "the value of the inventory" mean *the value of the whole inventory*,

not any part of it. But if the word "loss" does not mean "*net loss*," then the fact that this meaning is given to the words "the value of the inventory" is not of very much importance, since it is perfectly possible to have "a loss on the disposition of the inventory" notwithstanding the fact that a certain part of the goods which were included in the inventory have been sold at a profit the amount of which is greater than the amount of the loss sustained on certain other goods which were also included in the inventory.

Congress knows what a "*net loss*" is. When it has the idea of a "*net loss*" in mind it uses the term "*net loss*." In Section 204 (b) of the Revenue Act of 1918, Congress provided for a deduction on account of a "*net loss*" but carefully limited the meaning of the term by making it referable only to net losses resulting from either: (1) the operation of any business regularly carried on by the taxpayer; or (2) the bona fide sale by the taxpayer of certain property acquired by him on or after April 6, 1917, for the production of articles contributing to the prosecution of the present war. The term "*net loss*" was there defined to mean the "excess of the deductions allowed by law over the sum of the gross income plus tax free interest." Now if Congress had intended that only a "*net loss*" on the disposition of an inventory should be deductible, is it not reasonable to suppose that it would have used the term "*net loss*" and defined its meaning in Section 234 (a-14)?

Congress understands the meaning of the word "*net*" as evidenced by its use in Section 204 and in Sections 210 and 230. The fact that the word "*net*" was deliberately omitted in Section 234 (a-14) before the words "*loss*" and "*reduction*," is ample evidence that Congress did not intend

that losses on the disposition of any items on the inventory should be reduced by profits on other items in order to arrive at the amount of the "substantial loss."

V

In the discussion in the Senate December 16 and 17, 1918, it is repeatedly stated that the inventory loss section is a relief provision provided to give the "greatest possible relief" to the taxpayers.

Senator Penrose, Congressional Record, December 16, 1918, page 553, says:

The Committee . . . did provide . . . that if after any year's profit has been calculated a loss is for the first time ascertained due to the shrinkage in the level of inventory values or other similar cause there may be immediately an adjustment of the tax for the past year *allowing full recognition of this loss* even though not sustained through actual sales.

Senator Simmons says:

The amendment allows a rebate to the full amount of the shrinkage.

. . .

Under these circumstances the allowance for falling inventory as amended by the conferees will afford the *greatest possible relief* to the taxpayer.

. . .

The taxpayers have not yet come to realize the *great relief* it (inventory loss provision) will afford under the present conditions.

. . .

Under such circumstances the allowance for falling inventories as amended by the conferees will afford the *greatest relief* from the heavy taxes which the bill imposes.

The present ruling of the Bureau of Internal Revenue will afford the *least possible relief* which can be granted under the section—and the Bureau

thereby nullifies the intent and spirit of Congress as expressed both in the section itself and in the debate in Congress.

VI

From the time the first draft of Section 204 was written down to its final enactment, a number of changes were made in it. A point was reached where it was agreed that the section should provide in substance that if a net loss was sustained in the *calendar year 1919*, such net loss would be deductible from 1918 net income.

About that time it was pointed out that a number of corporations had sustained large losses in November and December, 1918, and in order that such corporations should get the full benefit of the section it would be necessary to include the months of November and December, 1918, in the net loss period. That was agreed to, and in the hurry of making the last minute changes the words "taxable year beginning after October 31, 1918, and ending before January 1, 1920" were inserted where the section had previously been intended to read "the calendar year 1919."

"The calendar year 1919" proposal appears to have had no reference to taxable year. Under it, it appears that a taxpayer whose taxable year ended June 30 could claim if he could show a net loss on the calendar year basis for 1919. The true intention of Congress was in fact to allow a net loss claim if the taxpayer could show that in any twelve consecutive calendar months out of the fourteen months—November, 1918, to and including December, 1919—he had sustained a net loss, the date of his taxable year was not to be a governing factor. The result of the error is that any corporation whose taxable year 1918 ended in any of the months

January to September inclusive is denied relief under Section 204.

The 1918 Revenue Act was passed February 24, 1919. The Regulations 45 under that act were issued April 17, 1919. Under these regulations it was impossible, either at the date of the passage of the act or at the date of issue of the regulations, for any corporation whose taxable year 1918 ended prior to October 31, 1918, to have its fiscal or taxable year 1918 changed so as to get the benefit of Section 204.

The Bureau has not issued a regulation which would permit of such a change, although the matter was brought to their attention in July, 1919. The Attorney-General has now decided that the Bureau could not legally have made such a regulation to permit a taxpayer to get the benefit of Section 204.

A case has recently been decided in which for the taxable year to September 30, 1919, a large net loss was sustained on the operations as a whole. The taxpayer can get no relief under Section 204 because its taxable year began 31 days before the time specified in Section 204, although the loss was actually sustained within the fourteen months period prescribed by Congress. Another corporation with a similar loss whose taxable year 1918 ended 31 days later, can recover tens of thousands of dollars of 1918 taxes. Is there any justice in that?

On November 3, 1919, the Secretary of the Treasury recommended that Congress make the following change in Section 204: that the words "and ending prior to January 1, 1920" be struck out, so that the section would mean that if a net loss is sustained for any taxable year beginning after October 31, 1918, such net loss could be deducted from the income of the previous year, and the taxes on the

net loss would be refunded to the taxpayer. If enacted into law that proposal would no doubt give relief in some cases, but the Sixty-sixth Congress failed to act on it. Anyone familiar with the facts knows that the Secretary's proposed amendment does not go far enough. He should also have suggested the elimination of the date October 31, 1918, and substituted October 31, 1917.

There are undoubtedly cases in which some measure of the relief denied under Section 204 could be properly and legally allowed under Section 234 (a-14) if the Bureau would allow a decision under Section 234 that a gross loss on the 1918 inventory is a proper claim.

The result of all the defects in Section 204 is that flagrant injustice is being done to some corporations and the true intention of Congress is being nullified. The much heralded relief provisions of the 1918 Revenue Act have largely petered out. The relief now being granted under these sections amounts to little or nothing as compared with what it would be if these sections of the law were reasonably administered.

The next Congress should amend both sections so that justice will be done.

VII

In the proposed new legislation the following wording of these sections should be made retroactive:

Net Loss Provision. Sec. 204. (a) That as used in this section the term "net loss" refers only to net losses resulting from either (1) the operation of any business regularly carried on by the taxpayer, or (2) the bona fide sale by the taxpayer of plant, buildings, machinery, equipment or other facilities, constructed, installed or acquired by the taxpayer on or after April 6, 1917, for the production of articles contributing to the prosecution of the present

war; and when so resulting means the excess of the deductions allowed by law (excluding in the case of corporations amounts allowed as a deduction under paragraph (6) of subdivision (a) of section 234) over the sum of the gross income plus any interest received free from taxation both under this title and under Title III.

(b) If for any taxable year or period beginning after October 31st, 1917, it appears upon the production of evidence satisfactory to the Commissioner that any taxpayer has sustained a net loss, the amount of such net loss shall under regulations prescribed by the Commissioner with the approval of the Secretary be deducted from the net income of the taxpayer for the preceding taxable year or period; and the taxes imposed by this title and Title III for such preceding taxable year or period shall be redetermined accordingly. Any amount found to be due to the taxpayer upon the basis of such redetermination shall be credited or refunded to the taxpayer in accordance with the provisions of section 252. If such net loss is in excess of the net income for such preceding taxable year or period, the amount of such excess shall under regulations prescribed by the Commissioner with the approval of the Secretary be allowed as a deduction in computing the net income for the succeeding taxable year or period.

(c) The benefit of this section shall be allowed to the members of a partnership and individuals and the beneficiaries of an estate or trust under regulations prescribed by the Commissioner with the approval of the Secretary.

Inventory Loss Provision. Resolved by the Senate and House of Representatives of the United States of America in Congress assembled,

That paragraphs (a) and (b) of subsection 12 of Section 214 and also paragraphs (a) and (b) of subsection 14 of Section 234 of the Revenue Act of 1918 are hereby amended to read as follows:

(a) At the time of filing return for any taxable year or period, a taxpayer may file a claim in abatement based on the fact that he has sustained a substantial Gross loss (whether or not actually realized by sale or other disposition) resulting from any

material reduction (not due to temporary fluctuation) of the value of the inventory at the close of such taxable year or period, or from the actual payment after the close of such taxable year or period of rebates in pursuance of contracts entered into during such year or period upon sales made during such year or period. In such case payment of the amount of the tax covered by such claim shall not be required until the claim is decided, but the taxpayer shall accompany his claim with a bond in double the amount of the tax covered by the claim, with sureties satisfactory to the Commissioner, conditioned for the payment of any part of such tax found to be due, with interest. If any part of such claim is disallowed then the remainder of the tax due shall on notice and demand by the collector be paid by the taxpayer with interest at the rate of 1 per cent per month from the time the tax would have been due had no such claim been filed. If it is shown to the satisfaction of the Commissioner that such substantial Gross loss has been sustained, then in computing the taxes imposed by this title and by Title III the amount of such loss shall be deducted from the net income.

(b) If at any time prior to the expiry of the statutory limit for presentation of claims for Refund it is shown to the satisfaction of the Commissioner that during any taxable year or period the taxpayer has sustained a substantial Gross loss of the character above described then the amount of such loss shall be deducted from the net income for the preceding taxable year or period and the tax imposed by this title and by Title III for such year or period shall be redetermined accordingly. Any amount found to be due to the taxpayer upon the basis of such redetermination shall be credited or refunded to the taxpayer in accordance with the provisions of section 252.

(c) That the provisions of this Section shall be applicable to any Taxable year or period subsequent to the Taxable year 1917.

VIII

There does not appear to be so much opposition to making the net loss provision applicable to the year

1920 as there is to the inventory loss provision. Many authorities, including some in the Treasury Department, are in favor of making the net loss provision a permanent policy. We shall therefore not write further on it.

But as to the inventory loss provision there appears to be less support for its re-enactment. Among the reasons advanced for this are:

1. The disgust and disappointment of the taxpayers at the interpretation by the Bureau of Internal Revenue of the existing inventory loss provision.

2. The uncertainty whether it means a net loss or a gross loss.

3. The expense of calculating the amount of a claim.

4. The difficulty the Bureau has had in deciding what claims should or should not be allowed.

5. That the inventory loss provision opens a wide door for fraud whether it is taken to be a net loss, or a gross loss, on the inventory.

6. That if one class of loss is thrown back from one year to another, why should not other classes of loss be thrown back—as for instance, bad debts?

7. That in practice, even a gross loss on an inventory would not result in any appreciable reduction in taxes because the rates of tax in 1919-1920 and future years do not or may not show so large a difference as those of 1918 and 1919.

We shall deal with each of these reasons in turn as follows:

1-2. These will disappear if the word "gross" is inserted in the section so that it is beyond question a "substantial gross loss" on the value of the inventory which is to be allowed.

3. Only in cases involving a sufficient or substantial reduction in taxes will it pay to make a claim. This is not a good reason why the section should not be re-enacted for the benefit of those taxpayers whose claim would warrant the expense of calculating it—and there are many such taxpayers

in 1920. Let each taxpayer be the judge but certainly give the taxpayer the opportunity to claim if he so desires.

4. The Bureau of Internal Revenue has created an impossible situation by its erroneous decision that the "net loss on the whole inventory" is the only permissible claim. As a result thereof it may be possible that the Bureau itself believes that it is having great trouble and difficulty in administering the section, and certainly the taxpayers believe they are having insuperable difficulty due to erroneous interpretation by the Bureau. The truth is that if the Bureau had properly interpreted the section to mean a gross loss, a large part of the difficulties in administering the section would never have arisen. There is no more real reason why it should be any more difficult to verify a claim for a gross loss on an inventory than it is to verify the original valuation of any inventory. It involves work, the same as the checking of an inventory does.

5. Is there any more opportunity for fraud in making an inventory loss claim than there is in making up an inventory? Is not the whole tax law open to chances for fraud? And what is more important, are the honest taxpayers to be unjustly or inequitably taxed because less than one per cent of the taxpayers may attempt to defraud the government? The "open to fraud" objection is not worthy of more than one moment's consideration.

6. (a) In the case of an inventory loss, it all falls on the holder of the goods and is an absolute loss on what he paid out for the goods and is easily determined in most cases.

(b) In the case of bad debts, the taxpayer must first lose his profit included in the sale price before he suffers any absolute loss on cost and

there is very often a substantial recovery made on liquidation. In the case of an inventory loss, there is no further chance to recover it.

(c) In the case of bad debts, the taxpayer has greater security in the form of the ability of his creditor to recoup his losses and in time to pay in full. In the case of an inventory loss it is final and irrecoverable.

(d) There is not the same degree of liability to suffer so sudden and severe losses from bad debts as there is from reduction in values of inventories.

(e) Especially severe conditions call for special relief provisions—are bad debt losses likely to be as great in proportion as inventory losses? We think not.

7. It is possible to have a refund of 40 per cent of an inventory loss in the year 1920. Anyone who knows the law and can figure correctly can show examples in which the application of the inventory gross loss provision will result in a very substantial reduction in taxes of the years 1919 or 1920. Those individuals who advance reason 7 as a basis for their opposition to the re-enactment of the section display their lack of knowledge of the possible cases that may arise.

IX

The most serious obstacle to amending and re-enacting these relief provisions is the idea that the Treasury cannot afford to return something between \$25,000,000 and \$100,000,000 of taxes already collected, to the taxpayers who have sustained losses during the taxable year 1920. To find new sources of revenue is proving so difficult a task that Congress may look askance at any provision which will result in a reduction of the net receipts of the Treasury. The argument is advanced that a taxpayer having once

made a profit for 1919 can afford to pay his tax in full on that profit, but if he subsequently sustains a loss, that that is his affair alone; it is not a matter of sufficient consequence to the government to call for any relief from the government.

The following statements were made in the Senate on December 16, 1918, during the discussion of these relief provisions of the 1918 Revenue Act:

"And let me say to the Senator that it does seem to me that the government of the United States cannot guarantee profits to any institution in this country." (Senator Smoot.) "And yet you propose to do it by this bill. You are guaranteeing a man Profits when you say that if he suffers a loss you will wipe out his tax." (Senator Hitchcock.)

The answer to these statements is that in the inventory loss provision the government would not undertake to guarantee the taxpayer against loss. The government would undertake to return to the taxpayer taxes *erroneously paid on estimated paper profits which do not materialize in cash value on actual realization.*

The root of the trouble is that the present rules for valuation of inventories are open to serious objection. Under ordinary circumstances the valuation so provided for is probably the most reasonable that can be made for the purpose of ascertaining *annual* profits. The method, however, is not only *not* infallible but under abnormal conditions may be dangerously unjust to the taxpayer. It is a guess or estimate of the value of the inventory. "It is a mere guess at profits. The actual test is what the goods sell for in the natural course of business in the weeks immediately following the inventory." (Senator Hitchcock.) These guesses or estimates very frequently prove to be serious overstatements in

part, and frequently in whole, over the amount actually realized. It is evident, therefore, that the rules should be amended to eliminate injustice, as far as possible, due to erroneous estimating or guessing or due to unforeseen circumstances:

We say, "If you through some unforeseen accident or some cause over which you have no control have lost during the year half of what you ought to have made, of course you are entitled to take it off by exemption." (Senator Smoot.)

Various proposals have been made to meet the difficulty of getting a reasonable valuation of inventories. Probably the most practical solution is the inventory loss section, provided it is properly worded and interpreted and reasonably administered by the Treasury Department. The net loss provision follows close on the heels of the inventory loss provision, but even if properly worded and applied the net loss provision alone will not give the proper measure of justice or relief in many cases. The inventory loss provision alone, if properly worded and applied, will give a *more essential measure of justice* than the net loss provision alone will give, and the combination of the two provisions, properly worded and applied, will round out and complete, in what is probably the most practical way, the rules for determining the amount of profits or income which should be subjected to the income and profits taxes.

We say that the inventory loss provision is the more essential of the two because it will ultimately render it impossible to tax *unrealized estimated paper profits* caused by *erroneous estimates of the value of the inventory*. The inventory loss section provides for the return to the taxpayer of an amount of tax *unjustly* taken from him on an

amount of paper profit *which he never in fact possessed* or realized. The net loss section provides for the return to the taxpayer of an amount of tax *justly* taken from him on a profit which he *did in fact realize* but which he *subsequently reinvested* in another transaction and lost on the new transaction.

It is much more unjust to tax a man on something he never possessed than it is to refuse to give him back the legitimate tax once paid on profits realized, because he embarks on another venture and sustains a loss thereon. Of the two sections, the net loss provision is open to more serious objections than is the inventory loss provision, because the net loss section puts a premium on embarking on unfruitful new ventures.

Regarding the state of the Treasury, if these relief provisions are amended and re-enacted for 1920, there will undoubtedly result a considerable reduction of the net receipts of the United States Treasury, but that fact alone should not be allowed to prevent their re-enactment in order to provide a more just and equitable result to the taxpayers. If necessary, the rates of taxation should be increased to make good the deficiency. It is much better to call justly for a greater tax from 90 per cent of the taxpayers, than it is to overtax unjustly and erroneously the other 10 per cent. And we fear that the proportion which will be unjustly taxed if these provisions are not re-enacted will be much greater than 10 per cent. If relief is not granted, some corporations may go into bankruptcy, and that can be avoided in part or in whole by the passage of these relief provisions. To allow the goose that lays the golden egg to be killed is folly when the goose can be nursed so as ultimately to lay more golden eggs.

The present emergencies should not be allowed to prevent the creating of a

sound system of adjusting the values of the inventories for the past three years and for future years. The necessity for these relief provisions is much greater now than it was when the 1918 Revenue Act was passed by Congress.

Two of the most serious objections to the system of taxing *annual profits* can be and should be laid to rest by amending and re-enacting both relief provisions and by making them retroactive to the year 1917. The bases for these objections are:

1. The uncertainty as to what the inventories will realize in practice.

2. The period of one year adopted arbitrarily for determining taxable profits does not give a sufficient length of time in which to determine the average taxable profit made over a period of years. It is a poor

rule that does not work both ways. If the government is a partner and shares in the taxpayers' profits, it should also share in his losses to the extent of its share in his profits over a period of not less than three years.

X

This article is intended to explain in detail and to show clearly, and without the possibility of misconstruction, what is required in the way of legislation in order to afford practical decisive relief to taxpayers. Because Congress is shortly to be convened in special session, it is hoped that this contribution to *Administration* will be of interest to taxpayers and to members of Congress in the framing and enactment of relief provisions under any new revenue acts.

PROBLEMS FOR THE BUSINESS EXECUTIVE

ACCOUNTING PROBLEMS

BY HAROLD DUDLEY GREELEY

IN the February issue a simple financial cost system for a general building contractor was discussed. While it is not the intention to devote much space in this department to cost accounting problems, it may be of interest to note a few phases of cost problems which particularly concern the executive. In a discussion of these phases no attempt will be made to present the subject of cost accounting in skeleton or outline form, or to develop fully any one portion of it. The first would be impracticable on account of lack of space, and the second might develop into an elaborate elucidation of the obvious for many of our readers. Accordingly, in this instalment there will be set down only a few stray and random thoughts concerning certain features of cost accounting with which the executive comes or should come into frequent contact.

In the first place, it is believed that a system of cost accounting is merely a piece of machinery in an organization, installed there to perform a particular function. A cost system is not an end in itself, but is merely a means to an end, and a cost accountant who fails to recognize this cannot expect to win and hold the attention of the general executive of the business. When such an executive installs a piece of machinery, he is not interested in the details of its construction. He leaves those to the manufacturer of the machine, because he realizes that his own knowledge and training, as a rule, will not qualify him to understand the mechanical details, much less to construct them. Nor is he interested in the details of the operation of the machine. The executive usually regards that piece of accounting machinery known as a cost system in much the same way. While he may become familiar with the general features of its construction and operation, if he is wise he will leave the details to technical experts in whom he has confidence.

What interests the executive vitally in connection with the cost system is the same kind of thing which interests him in connection with any other machinery, namely, whether or not it functions properly and whether or not it produces the result which he desires. The functioning of a cost system is efficient if its cost of operation is not excessive as compared with the results produced, and if it produces the results desired without interfering with the production or other activities of the plant. During the war there were many complaints from contractors throughout the country that the cost systems required by the various departments of the government did interfere with production. While there undoubtedly were cases in which this criticism was justified, it is believed that in most instances any delay in production was not the fault of the cost system, but was due to the failure of the contractor to understand the importance of cost information and to co-operate in securing it. This was probably the result in many cases of the contractors' unfamiliarity with modern cost methods, and one of the by-products of the war may be said to be a contribution to the education of manufacturers in the matter of cost accounting.

The result desired of a cost system is the bringing to the attention of the management of all vital and significant facts concerning the production of the plant. It may even be said that modern cost methods tend to restore somewhat the personal contact between employer and employees which was commonly found prior to the extensive modern development of industry. J. P. Jordon, Vice-President of the C. E. Knoeppel Company of New York, has developed this idea in an interesting way, showing that the contact now secured between the employer and his employees is not personal in the sense that it formerly was, but is, nevertheless, complete. The

large employer of today is not in a position to know each workman by name and to be familiar with his individual and personal problems; but, nevertheless, he is able to ascertain from his records whether or not the performance of each employee is efficient and up to the required standard.

In the well-organized plant the cost accountant resembles somewhat an airplane scout in military forces. His function is to keep the executive informed concerning all facts and tendencies which may in any way promote or retard the progress of the plant. He should report promptly any matter of interest without waiting to be requested, just as a scout should report any vital fact. A cost accountant who fails to report any matter of significance because he was not specifically requested to do so, would be as much at fault as a scout under similar conditions. It is only by a thorough recognition of this principle that a cost accountant will be able to make himself as valuable as he deserves to be. Probably no person in an organization is in a better position to aid in effective management than is a properly qualified cost accountant who realizes the potentialities of his position. Three of the fundamental requirements of an adequate cost system are that it produce needed information with promptness and accuracy and that the information be genuinely readable.

Promptness in producing the information, while absolutely essential, is, of course, a relative term because conditions vary among industries. In a cement-mill, for example, monthly information would probably be sufficient, particularly if the cost of clinker or the cost of grinding had to be estimated. Likewise, in a plant manufacturing oxygen, hydrogen, nitrous oxide, and other gases for commercial use, monthly figures would usually be adequate. This would be especially true if the various elements of cost could not be exactly allocated to individual products. Under conditions such as found in the last two examples, complete accuracy in the ascertainment of costs by products is impossible, and as the elements of cost would not violently fluctuate from week to week, monthly figures should provide all the information necessary for administrative control.

Where, however, the elements of cost are more constant and are capable of specific allocation to products, processes, or jobs, reasonable promptness might require figures to be presented every four weeks, the year being divided into thirteen fiscal periods of four weeks each. When a special industry with a short productive season is involved, as, for example, a summer hotel, information should be produced weekly. This applies also to the theatrical profession where the uncertainties are such that a week has been found in most cases to be the best fiscal period. The work of the general building contractor described in the February issue disclosed a situation where exact cost information should be compiled, at least as to certain elements, from day to day. In that industry the method of cost-keeping proposed was based on recording in costs all subcontracts at the time of their execution instead of recording as costs only the approved requisitions or payments to subcontractors. In this way a daily check can be kept upon the costs as they mount up toward the estimate upon which the bid was based.

In each industry care should be exercised in determining the degree of promptness required in securing cost information. The controlling factors are, of course, the use to which the information is to be put and the practicability of requiring its preparation within the limit of time determined upon. The fundamental principle is that the information must be timely. The executive wants news not history. When information brought to him is too old to be of practical value, he is likely to scrutinize it in the manner of a diner in a hotel who made a critical examination of an order of boiled eggs. When the waiter inquired whether or not they had been boiled long enough, he answered, "Long enough, but not soon enough."

The second requirement is that of accuracy. Probably no one would question the desirability of accuracy, and yet experience shows that many executives do not appreciate the fact that accuracy cannot be assured unless the cost records are definitely connected with the general books of account. While such connection does not insure accuracy, it furnishes at least

prima facie evidence of it; and when it is impossible to prove the cost figures by comparison with those on the general financial books, there is no assurance that they are reliable. Many an impatient executive takes the attitude that he is not interested in mere bookkeeping but that he wants to know at once the cost of each production order. Such men should realize that an inaccurate cost is likely to be misleading and of less value than an estimate made without reference to the detailed cost records, because a recorded cost has the semblance of being authoritative. Obviously there can be no certainty that all of the items of cost have been accounted for unless the cost accounts are made a part of the general financial accounting system. When, therefore, an executive insists upon keeping his cost records posted to date but allows his financial books to remain unposted for a month or two behind the cost records, every effort should be made to convince him that his cost figures may not be reliable and should not be used except as unverified estimates.

Like promptness, accuracy is a relative term, and striving for exact accuracy should not be permitted if the cost of securing it is greater than the value of the result obtained. For example, the distribution of raw material storage cost by means of loading a portion on each issue so that the total cost will be absorbed when all raw materials have been put into process, is theoretically correct, but the difficulty of determining a fair basis for the distribution where items of raw material vary considerably in value, weight, and bulk, may be such that it will be impracticable to apply this method. Under these circumstances the natural desire for exact accuracy should be curbed and approximate accuracy secured through treating the storehouse expense as an item of factory overhead.

Another instance in which the cost of securing exact accuracy would be excessive is where scrap resulting from a complicated manufacturing process cannot be readily related to specific work in process. Under those conditions the proceeds of such scrap might better be taken to reduce the factory overhead or conceivably recorded as mis-

cellaneous income. Some of the departments of the government meet an interesting phase of this problem. Expenditures by a department cannot exceed the amount appropriated and the amount to be expended cannot be increased by miscellaneous receipts of the department. If the proceeds of sales of scrap are not credited to the cost of work, they must be included as miscellaneous receipts of the government and cannot be used until they are appropriated by Congress. The tendency, therefore, is to credit such receipts to the cost of work even though it may be impossible to connect the scrap definitely with the raw material entering into the product. In this case the desire for accuracy is modified by a rule of expediency. By crediting the proceeds of scrap sales to the cost of work, exact accuracy is not secured, but the amount available for expenditure is not reduced.

As a means of securing accuracy in the distribution of expenditures, a careful classification of accounts is necessary. In some cases the Dewey decimal system can be used in this classification, but care should be exercised not to allow the account numbers to exceed five digits in order to avoid unwieldy figures. These account numbers can then be used as the numbers for maintenance or standing orders, the production orders carrying a different series of numbers. Incidentally, the use of decimal systems can frequently be extended with considerable advantage. For instance, the division of the hour into ten periods of six minutes each may furnish a more usable unit of time than quarter-hours. In fact it is reasonable to believe that the adoption of the metric system in place of our present scheme of measurements with all the various units, might prove of value in expediting the collection of cost data and therefore in "speeding up" production.

The third general requirement of cost statistics is that they must be presented in readable form, with the idea of *attracting* the attention of the executive to their significant features. Cost data will not be used in the way that they should be used unless the figures are interpreted by the person who prepares them and stated in

such a manner that the salient features will be outstanding. The method of making cost statistics significant must depend upon the circumstances of each case, taking into account all reasonable preferences of the executive for whose use the figures are prepared. If a graphic presentation will accomplish the purpose, it should by all means be used, but in its use care must be taken to have the graphs prepared by persons who understand graphic presentation. An improperly prepared curve or other chart may be grossly misleading.

The cost accountant is sometimes confronted by an executive who maintains that the accountant's function should be limited to *presenting* figures, leaving the *interpretation* of them to the executive. While it is true that the interpretation of figures for use in administrative control requires the point of view of a person sufficiently high in the organization to be able to see all of its business problems, nevertheless, an interpretation made by a person not at the very peak of the organization may be of suggestive value. In a properly organized plant the person in charge of the cost records should be very close to the executive, and while not possessing the latter's knowledge of the business as a whole, he should have a sufficient grasp of its policies and operation to enable him to make a fair interpretation of cost statistics and a reasonable forecast for the immediate future. It is believed that in no case will the administration of the business be hindered if the person in charge of its cost system is encouraged to prepare his interpretation of its cost statistics, presenting at the same time all of the data upon which his conclusions are based. The modification of his interpretations is an easy matter, and if his work is properly performed, he should be in a position, because of his intimate knowledge of the factory operations, to make observations which might escape the attention of the executive who necessarily has a more limited contact with cost details.

One of the significant facts to be brought out in cost statistics is the cost of idle time. This should be analyzed completely so that the causes of idle time may be brought to the attention of the management and if possible corrected. This can best be done

by having a separate account with a corresponding maintenance or standing order for each chief cause of idle time. For example, each of the following causes might have a separate standing order:

- Lack of work.
- Waiting for instructions.
- Waiting for tools.
- Waiting for material.
- Waiting for crane.
- Broken machine.
- Power off.

By keeping records in such detail the attention of the management is forcibly brought to losses which should be avoided.

In much the same way the cost of defective work should be stated separately. The causes of it may be inferior material, incorrect instructions, careless supervision, or mistakes by the workmen. Whatever the cause, it is advisable to have the cost so stated that its full effect will be felt. In many businesses the margin between profit and loss is due to minor and seemingly unimportant losses such as these, most of which could be corrected if their importance were realized.

Accounting for defective work need not be limited to factory operations. Mistakes are made at every point in an organization, and where practicable the losses due to avoidable errors should be stated separately. One way in which this can be accomplished is to have an expense account for losses in the performance of each of the functions of the business; that is, in manufacturing, selling or marketing, general administration, and financing. A preventable loss in purchasing might be incurred through a faulty requisition or purchase order, as a result of which payments had to be made for material which could not be used.

An example of an unnecessary loss in selling would be the sending of a shipment by a circuitous route when the freight outward is a selling expense. An example of a loss falling within the general administrative department of the business would be an error in the accounting department whereby foreign exchange was incorrectly calculated, with the result that a balance due from a foreign house would be largely overstated. In that case an excessive income tax might be paid and the cost of

recovering the overpayment could fairly be charged as the result of an error made in the general administration of the business. While there are cases in which it would be difficult to determine the extent of a loss due to an error, wherever such a loss can be definitely known and its proximate cause determined, the amount of the loss makes an interesting figure on the financial statement. If the Dewey decimal system is used for numbering in the classification of accounts, it would be well to have all of these loss accounts carry the same generic number.

The final disposition of the expense of idle time and defective work is a matter concerning which there may be a reasonable difference of opinion. It is felt by some accountants that these losses should form part of the overhead of the business and be distributed to the cost of usable product manufactured. It is believed, however, that if the losses are preventable or are unusual, a more significant figure is obtained if the cost of these losses is charged directly to Profit and Loss and not added to the cost of product. If this disposition of the items is made, what may be called "normal costs" of product are secured, and not only is a standard of performance set, but also the unnecessary and preventable losses are emphasized. Thus in undertaking new work, costs can be more accurately forecast. This is particularly true if the cost of idle time due to lack of work is eliminated from the cost of product manufactured.

The desire to account for defective work and idle time should not, however, be carried to a point of such extreme precision that the figures obtained for the cost of product will not disclose the ordinary losses to be expected under good supervision. For example, if a workman were sent to install a machine at a customer's plant, all the costs of his time while engaged on that job should normally be charged to that job, notwithstanding the fact that part of his time may have been lost because of delay in shipments, or part of it may have been spent in engaging workmen. If items of the latter kind were not charged to the job but were charged to the maintenance or standing orders for idle time or supervision, the cost of making the machine installation

would be misleading for future reference. In the absence of unusual conditions, the same sort of loss might be expected on each subsequent job and should be allowed for in making estimates. Further, the charges to maintenance orders for idle time and supervision should reflect only the costs within the plant itself. Another fundamental principle involved is that all items which can fairly be charged directly to a job should be so charged in order to keep down the amount of overhead charges. Indirect items of overhead are necessarily somewhat indefinite, and their amount should be kept at as low a figure as practicable.

Turning now from the subject of cost statistics as they affect the management to the question of general financial information as it affects persons outside of the business, the following case suggests an interesting point. In the prospectus of a new corporation which was in the process of organization, a very small organization expense item appeared on the balance sheet. It must have been evident to anyone familiar with the organization of a business such as that which put forth the prospectus that the organization expense would normally have been much greater. A casual examination of the balance sheet did not suggest a reason for the comparatively small amount of this item. One of the officers of the corporation, when called upon to explain the balance sheet, furnished the key to the situation when he said that the capital stock which was carried on the balance sheet at par had been issued at a premium and the premium used to reduce the organization expense. It is questionable whether this practice disclosed to prospective investors all the information to which they were entitled.

Where organization expenses are small in amount, premiums on the issues of capital stock may properly be used to cancel them, because the organization expenses are deferred charges which would normally be written off to Profit and Loss over a period of years and thus through the Surplus account offset against the premiums on the stock. Where, however, the organization expense is substantial, it would seem better practice to show the whole amount.

This would, at least, serve to give an idea of the efficiency of the organization procedure. A prospective investor also has a legitimate interest in knowing whether or not previous investors have secured stock at par or at a premium. It developed in the case under review that the premium asked of new investors exceeded that secured from original investors, although the necessity for such premium had ceased to exist.

In the January issue reference was made to various profit-sharing and bonus plans. Since the publication of that issue another somewhat similar problem has arisen. It was desired to distribute a portion of a company's profits to its employees on a basis which would take equitable cognizance of both length of service and rate of compensation. In other words, it was desired to take into account the fact that a high-salaried employee was expected to be worth more to the business than a low-salaried one and also the fact that an employee with a considerable length of service was entitled to consideration notwithstanding the money value of his services. It is obvious that if the bonus consisted of a percentage on salaries, the high-salaried employee would secure a large part and the low-salaried employee but very little. It was equally obvious in this case that a bonus based entirely upon length of service would give a low-salaried employee who had been with the company many years a larger share of the profits than a high-salaried executive who had but recently entered the company's employ. In most of the literature on this subject the customary method of bonus distribution is stated to be the payment of percentages to employees grouped according to length of service, the percentage gradually increasing with years of service. It was felt that in this plan the two factors of salary and length of service were not adequately represented. The method finally adopted was to weight the employee's salary by the number of years of his service and to use these weighted amounts as the basis for the bonus distribution. For example, for a \$2,000 employee who had been in the service of the company for ten years, a yearly equivalent of \$20,000 would be set.

For a \$5,000 employee who had been in the company's service for five years, a yearly equivalent of \$25,000 would be stated. Assuming for the sake of illustration that these were the only employees, 20/45, or 4/9, of the total profits to be divided would be distributed to the first employee and 5/9 to the second. It may be remarked that this method might not be practicable if the number of employees was large and if the labor turnover was high, that is, if the employees were frequently changed. Where the employees are comparatively few in number, the method would generally furnish an equitable basis for the bonus distribution.

Another problem with which the executive is frequently confronted is that of adequate filing. It would be without the scope of this department to discuss filing systems in general, but there is one phase of the filing problem which concerns the executive and which is generally ignored. Almost everyone who does not make a business or profession of filing is delighted when papers are filed and out of the way, and most offices are able, after a fashion, to find papers in files when they are needed. There is, however, a danger in filing which has been known in many cases to involve losses, and that danger may be called "premature" filing. Papers which obviously require following up are usually noted in some way upon a tickler system, but many papers have been known to go into the files where further action might have been taken to the profit of the business.

It is suggested, therefore, that the executive provide in the organization for some one responsible subexecutive to examine all papers prior to filing and to satisfy himself that no further action can profitably be taken in the matters covered by them. Such a person would resemble a "watch dog" of the treasury, except that his function would be the reverse. His duty would not be to see that nothing goes out, but that nothing goes in which should not properly be admitted. Such a person could frequently assist materially in extending the sales and occasionally in collecting accounts or securing credit information. The very natural striving of a busy executive to clean up each day's business each

day should never be allowed to result in the filing of any paper or document until the last bit of its usefulness has been extracted.

Since the last issue of this department a question has been received concerning the adjustment of an overstated inventory. It appeared that in this business the inventory had been grossly overstated and probably overvalued, through including in it many items which were not merchandise. In making the inquiry the following question was asked:

In handling the bookkeeping of this concern I find that for a great number of years the purchases of the current year were included in the taking of the inventory, regardless of whether they had previously been charged to a nominal account or were asset items. Is there any immediate remedy which can bring these books to the proper status?

From the wording of the question it is inferred that the inventory contains items which are not strictly merchandise and that the valuations were at cost prices regardless of market conditions. It is, of course, the general rule that fixed assets should be represented by accounts on the books which should be carried at cost less reasonable depreciation, and that the current asset of merchandise should be inventoried by physical stock-taking unless a running inventory is maintained in the accounts, the valuations being at cost or market, whichever is lower. In the case referred to, the only procedure seems to be to eliminate from the inventory all items which are not merchandise intended ultimately for sale. The most immediate remedy would probably be an appraisal, although the valuation of the inventory by reference to purchase invoices would be preferable if the items in it could readily be identified with purchase invoices.

After the correct amount of the inventory has been ascertained by the best method, an entry should be made reducing the inventory account on the ledger or by crediting whatever other account was charged with the inventory and by making the offsetting debit to the Capital or Surplus account. This recommendation is based on the assumption that the error in

the inventory was not discovered until after the books had been closed. In that event the reduction of the gross profit would not be an item falling within the current fiscal period, but would be an adjustment of earnings of the preceding period. Items such as prepaid insurance, prepaid interest, prepaid rent, and the like, should not be included in the inventory but should, of course, be valued and carried on books as deferred charges. If these deferred charges have been overstated, the correction can be made by the same sort of entry required for the correction of the inflated inventory. The only general principle involved in making these corrections is to charge or debit them so that the current fiscal period will not bear any loss which does not fall within the period. Thus, all accounts which were erroneously affected by the overstatement of inventories or deferred charges will be corrected.

Another question referred to the department concerns deficiency warrants of a municipality and raises a question of law rather than one of accounting. There is in the problem, however, a situation which might be more or less paralleled in corporation accounting.

The laws of a state provide that it is unlawful for school trustees to issue deficiency warrants, that is, warrants over and above the estimated receipts as determined from the tax levy on assessed valuation. Some years ago in floating a bond issue, the trustees passed a resolution that each year there should be set aside out of the first money received, \$2,500 for a sinking fund to retire the bond issue, and also a sufficient sum to cover interest on the bonds for the current year. Each year the trustees entered into contracts with teachers. As a matter of fact, the sinking fund was not set aside and no provision in advance was made for the payment of bond interest, interest on the bonds being paid by warrants as it fell due. The general procedure was to draw warrants for all items as they became due, regardless of the funds out of which the warrants could legally be paid, and as a result, warrants greatly in excess of actual and estimated income were issued. Two of these interest warrants fell within a period when there was neither actual nor

estimated income with which to pay them, and the question arose as to whether they were deficiency warrants or entitled to payment by having other warrants of a like amount regarded as deficiency ones. Another question involved was whether warrants to teachers should be regarded as issued at the date of the warrant, or as of the dates of the contracts with the teachers.

A decision of these questions could not safely be made without more facts and without reference to the statutes of the state in which the case arose. Whether the funds expendable by the school trustees were legally charged or appropriated at the time that contracts were entered into which normally would necessitate payments, or whether the funds were chargeable at the time the payments became due by virtue of service having been rendered, or whether they were charged only at the time warrants were actually drawn, is a question of law the answer to which would fall without the scope of this department. There are, however, certain accounting questions suggested in this situation.

In the first place, while the resolution of the school trustees to set aside each year \$2,500 as a sinking fund instalment to retire the bond issue might amount in the case of a municipality to an appropriation of cash raised by the tax levy on the assessed valuation, a similar provision in commercial accounting would have no effect upon the income earned by the business. The requirement for the sinking fund is a financial arrangement whereby cash in a certain amount is to be deposited in a special fund for use in liquidating the liability incurred upon the bond issue. While the effect of setting aside the sinking fund instalment would be to reduce cash available for current use, the amount of the sinking fund instalment would not be an expense and thus should not be charged to Profit and Loss or against Surplus. If the bond issue

required the sinking fund, which in this case it does not seem to require, a corporation issuing the bonds and setting aside the sinking fund might find itself in the position of having a surplus available for dividends but no cash with which the dividends could be paid. In that event the advisability of borrowing money for the purpose of paying dividends or of declaring stock dividends or possibly of paying dividends in assets other than cash, would involve financial rather than accounting policies.

If the bond issue required the setting aside of the sinking fund "out of profits" it would be wise, although perhaps not absolutely necessary, to reserve out of the surplus an amount equal to the sinking fund instalment at the time each instalment was set aside. This would temporarily reduce the surplus available for dividends until the redemption of the bonds by means of the sinking fund. At that time the reserved surplus would be released from the reservation and would become available for dividend purposes. A stock dividend, or the "cutting of a melon," might reasonably be expected. There should be no confusion, however, between the setting aside of a sinking fund which is the conversion of one kind of asset into another, and the reserving of a portion of surplus which requires merely a journal entry and which results only in withholding from dividend distribution the amount so reserved or set aside.

In commercial accounting, it would generally be wise to regard instalments of interest, salaries due under contracts, and other charges which can be provided for in advance, as appropriations which must be met. Under that view any payments in excess of those appropriated amounts would be deficiency payments and should not be made unless funds were available to meet them.

A PROBLEM IN FEDERAL TAXES

By ERIC L. KOHLER*

THE income tax problem for March involves particularly the treatment of the depletion of wasting assets. The specific features of the problem are:

1. Calculation of the depletion of timberland under revised Articles 228-237 of Regulation 45.

2. Introduction of March 1, 1913, values which must be put on the books if depletion is to be calculated thereon.

3. Calculation and treatment of realized appreciation.

4. A brief discussion of timber inventories.

THE PROBLEM¹

The Forest Hills Lumber Company is an Illinois corporation owning and operating timberlands in Arkansas. On December 31, 1920, a trial balance was prepared from the books as follows:

Forest Hills Tract—Land and Timber.....	\$698,750.00	
Brownsville Tract—Land and Timber.....	500,000.00	
Forest Hills Mill and Equipment.....	75,000.00	
Forest Hills Logging Equipment.....	40,000.00	
Brownsville Mill and Equipment.....	78,452.20	
Brownsville Logging Equipment.....	40,934.34	
Furniture and Fixtures—Chicago Office.....	7,321.80	
Inventories, January 1, 1920—Logs (1,607,433 ft. at \$20).....	32,148.67	
Inventories, January 1, 1920—Lumber (2,375,280 ft. at \$33).....	78,384.18	
Inventories, December 31, 1920—Manufacturing Supplies.....	8,384.18	
Accounts Receivable.....	368,455.12	
Due from Officers and Employees.....	2,100.00	
Cash on Hand.....	512,983.31	
Working Funds at Mills.....	15,185.40	
Prepaid Expenses.....	2,870.75	
Capital Stock—Preferred (8,000 shares).....		\$800,000.00
Capital Stock—Common (10,000 shares of no par value).....		20,000.00
Bank Loans.....		18,475.20
Accounts Payable.....		6,321.12
Accrued Wages.....		299,700.00
Capital Surplus (from revaluation Forest Hills Tract)....		
Capital Surplus (from revaluation Forest Hills Mill and Equipment).....		19,159.14
Capital Surplus (from revaluation Forest Hills Logging Equipment).....		7,476.11
Reserve for Depletion—Forest Hills Timber.....		139,050.00
Reserve for Depletion—Brownsville Timber.....		85,000.00
Reserve for Depreciation—Forest Hills Mill and Equipment.....		23,916.67
Reserve for Depreciation—Forest Hills Logging Equipment.....		12,300.00
Reserve for Depreciation—Brownsville Mill and Equipment.....		23,535.66
Reserve for Depreciation—Brownsville Logging Equipment.....		12,280.30

* Certified Public Accountant; Associate Professor of Accounting, Northwestern University, Chicago, Ill.

¹ The author is indebted to John Madsen, C. P. A., for many of the details of this problem.

Reserve for Depreciation—Furniture and Fixtures		\$2,126.18
Surplus—Balance, January 1, 1920		769,778.59
Dividend on Preferred Stock, February 15, 1920	\$80,000.00	
Sales—Lumber (24,353,280 ft.)		1,518,460.00
Sales—Logs (4,224,707 ft.)		126,741.20
Purchases—Logs (16,400,000 ft. at \$20)	328,000.00	
Purchases—Logging Supplies (net)	23,417.20	
Purchases—Mill Supplies (net)	16,390.04	
Logging Labor	155,250.00	
Sawmill Labor	233,682.35	
Overhead Expenses—Logging	55,691.03	
Overhead Expenses—Mill	93,867.20	
Repairs—Logging	3,450.36	
Repairs—Mill	12,653.12	
Taxes (except Federal Taxes)—Mill	13,892.43	
Officers' Salaries	30,000.00	
Office Salaries	21,675.00	
Office Expenses (including 1920 provision for Depreciation on Furniture and Fixtures)	51,463.21	
Interest	2,318.00	
1919 Federal Taxes	301,600.28	
	<u>\$3,884,320.17</u>	<u>\$3,884,320.17</u>

Depletion may be written off either by using the average price for all species, or by taking the price of each species separately. Should the timber in species when cut not average approximately the same percentage as estimated at the time of purchase because the operator has chosen to cut certain species for which there was a greater demand, or because some species on parts of the tract run heavier or lighter than the average, the better method would be to deplete on the basis of the individual species, in order to arrive at a more accurate profit.

The cost of the land and the uncut timber on the Forest Hills Tract on March 1, 1913, was:

Land, 12,500 acres at \$8 per acre	\$100,000.00
Timber, 62,500,000 ft. at \$4 per M.	250,000.00
Total Cost	<u>\$350,000.00</u>

A fair value of this property at March 1, 1913, was arrived at and approved by taking as a basis land and timber sales on about that date, as follows:

Land	12,500 acres at \$25.00 per acre	\$312,500.00
Timber:		
Oak	25,000,000 ft. at \$8.00 per M.	\$200,000.00
Gum	20,000,000 " " 5.00 " "	100,000.00
Cottonwood	7,500,000 " " 5.50 " "	41,250.00
Miscellaneous Species	10,000,000 " " 4.50 " "	45,000.00
Total	62,500,000 " " 6.18 (average cost) per M.	<u>\$386,250.00</u>
Total Land and Timber		<u>\$698,750.00</u>

Since March 1, 1913, all production has been taken on the average cost per thousand. Up to January 1, 1920, 22,500,000 ft. had been cut. During 1920, 7,500,000 ft. were cut.

On March 1, 1913, the status of the Forest Hills Mill and Equipment and Logging Equipment was as follows:

	<i>Cost</i>	<i>March 1, 1913, Value</i>	<i>Appreciation to be Realized</i>	<i>Life</i>
Mill and Equipment.....	\$45,897.50	\$75,000.00	\$29,102.50	20 yrs.
Logging Equipment.....	28,643.88	40,000.00	11,356.12	20 "

The appreciated values are based on an appraisal of the Universal Engineering Company as of January 1, 1913. Salvage values of \$5,000 for mill and equipment and \$4,000 for logging equipment have been used in the yearly computations.

In 1916 the Brownsville Tract was purchased and consisted of the following:

Land.....	12,000 acres at \$23.00 per acre.....	\$276,000.00
Timber:		
Oak.....	5,000,000 ft. at \$7.50 per M.....	\$37,500.00
Gum.....	30,000,000 " " 5.00 " ".....	150,000.00
Cottonwood.....	3,000,000 " " 5.50 " ".....	16,500.00
Miscellaneous Species	6,800,000 " " 2.94 " ".....	20,000.00
Total.....	44,800,000 " " 5.00 (average cost) per M.....	\$224,000.00
Total Land and Timber.....		\$500,000.00

No salvage values will be realized. The property has been depreciated on the basis of ten years from January 1, 1917. Average costs have been taken in this tract also. From January 1, 1917, to January 1, 1919, 17,000,000 ft. were cut; in 1920, 6,600,000 ft. were cut.

Average costs are taken throughout and the operations of the two mills taken as one. At December 31, 1920, the logs at mills included no outside purchases and none of the opening inventory of either logs or lumber was on hand. These inventories are:

Logs at Mills.....	500,000 ft.
Lumber.....	5,404,726 ft.

Prepare a working trial balance containing the necessary adjustments, calculate invested capital, and compute the tax liability.

SOLUTION TO PROBLEM

FOREST HILLS LUMBER COMPANY STATEMENT OF COST OF PRODUCTION Year Ending December 31, 1920

Logging Operations:

Logs cut on Forest Hills Tract 7,500,000 ft. at \$6.18 per M...	\$46,350.00
Logs cut on Brownsville Tract 6,600,000 " " 5.00 " " ..	33,000.00
	<hr/> \$79,350.00
Logging Labor.....	155,250.00

Operating Expenses:

Overhead Expense.....	\$55,691.03
Supplies.....	23,417.20
Depreciation on Equipment.....	5,893.43*
Repairs.....	3,450.36*
	<hr/> 88,452.02

Total Logging Cost.....	14,100,000 ft. at \$22.91 per M.....	\$323,052.02
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FOREST HILLS
Working Trial Balance

PARTICULARS	TRIAL BALANCE PER BOOKS DECEMBER 31, 1920	
	Debit	Credit
Forest Hills Tract—Land and Timber	\$698,750.00	
Brownsville Tract—Land and Timber	500,000.00	
Forest Hills Mills and Equipment	75,000.00	
Forest Hills Logging Equipment	40,000.00	
Brownsville Mill and Equipment	78,452.20	
Brownsville Logging Equipment	40,934.34	
Furniture and Fixtures—Chicago Office	7,321.80	
Inventories, January 1, 1920—Logs	32,148.67	
Inventories, January 1, 1920—Lumber	78,334.18	
Inventories, December 31, 1920—Supplies	8,384.18	
Accounts Receivable	368,455.12	
Due from Officers and Employees	2,100.00	
Cash on Hand	512,983.31	
Working Funds at Mills	15,185.40	
Prepaid Expenses	2,870.75	
Capital Stock—Preferred		\$800,000.00
Capital Stock—Common (no par value)		
Bank Loans		20,000.00
Accounts Payable		18,475.20
Accrued Wages		6,321.12
Capital Surplus—Forest Hills Tract		299,700.00
Capital Surplus—Forest Hills Mill and Equipment		19,159.14
Capital Surplus—Forest Hills Logging Equipment		7,476.11
Reserve for Depletion—Forest Hills Timber		139,050.00
Reserve for Depletion—Brownsville Timber		85,000.00
Reserve for Depreciation—Forest Hills Mill and Equipment		23,916.67
Reserve for Depreciation—Forest Hills Logging Equipment		12,300.00
Reserve for Depreciation—Brownsville Mill and Equipment		23,535.66
Reserve for Depreciation—Brownsville Logging Equipment		12,280.30
Reserve for Depreciation—Furniture and Fixtures		2,126.18
Surplus—Balance, January 1, 1920		769,778.59
Dividend on Preferred Stock	80,000.00	
Sales—Lumber		1,518,460.00
Sales—Logs		126,741.20
Purchases—Logs	328,000.00	
Purchases—Logging Supplies (net)	23,417.20	
Purchases—Mill Supplies (net)	16,390.04	
Logging Labor	155,250.00	
Sawmill Labor	233,682.35	
Overhead Expenses—Logging	55,691.03	
Overhead Expenses—Mill	93,867.20	
Depletion—Timber		
Depreciation—Mills and Equipment		
Depreciation—Logging Equipment		
Repairs—Logging	3,450.36	
Repairs—Mills	12,653.12	
Taxes—Mill	13,892.43	
Officers' Salaries	30,000.00	
Office Salaries	21,675.00	
Office Expenses	51,463.21	
Interest	2,318.00	
1919 Federal Taxes	301,600.23	
Net Profits (also taxable net income)		
	\$3,884,320.17	\$3,884,320.17

LUMBER COMPANY

December 31, 1920

ADJUSTMENTS		TAXABLE INCOME AND ALLOWABLE DEDUCTIONS		BALANCE SHEET	
Debit	Credit	Debit	Credit	Debit	Credit
				\$698,750.00	
				500,000.00	
				75,000.00	
				40,000.00	
				78,452.20	
				40,934.34	
				7,321.80	
(10) \$11,455.00	(10) \$11,455.00	\$32,148.67	\$11,455.00	11,455.00	
(11) 190,246.36	(11) 190,246.36	78,384.18	190,246.36	190,246.36	
				8,384.18	
				368,455.12	
				2,100.00	
				512,983.31	
				15,185.40	
				2,870.75	
					\$800,000.00
					20,000.00
					18,475.20
					6,321.12
(2) 16,350.00					283,350.00
(5) 1,455.13					17,704.01
(8) 567.81					6,908.30
	(1) 46,350.00				185,400.00
	(3) 33,000.00				118,000.00
	(4) 3,500.00				27,416.67
	(7) 1,800.00				14,100.00
	(6) 7,845.22				31,380.88
	(9) 4,093.43				16,373.73
					2,126.18
	(8) 567.81				788,151.53
	(5) 1,455.13				
	(2) 16,350.00				
				80,000.00	
			1,518,460.00		
			126,741.20		
		328,000.00			
		23,417.20			
		16,390.04			
		155,250.00			
		233,682.35			
		55,691.03			
		93,867.20			
(3) 33,000.00		79,350.00			
(1) 46,350.00					
(6) 7,845.22					
(4) 3,500.00		11,345.22			
(9) 4,093.43					
(7) 1,800.00		5,893.43			
		3,450.36			
		12,653.12			
		13,892.43			
		30,000.00			
		21,675.00			
		51,463.21			
		2,318.00			
				301,600.28	
		598,031.12			593,031.12
\$316,662.95	\$316,662.95	\$1,846,902.56	\$1,846,902.56	\$2,933,738.74	\$2,933,738.74

Sawmill Operations:	<i>Feet</i>	<i>Average Cost</i>	<i>Amount</i>
Logs cut:			
On hand, January 1, 1920.....	1,607,433	\$20.00	\$32,148.67
Produced, as above.....	14,100,000	22.91	323,052.02
	<u>15,707,433</u>		<u>\$355,200.69</u>
Less: Inventory, December 31, 1920	500,000	22.91	11,455.00
Logs own consumed in sawmill operation.....	15,207,433		\$343,745.69
Logs purchased.....	16,400,000	20.00	328,000.00
Total all logs consumed and sold...	31,607,433	21.25	\$671,745.69
Less: Logs sold.....	4,224,707	21.25	89,775.02
Logs Manufactured.....	<u>27,382,726</u>	<u>21.25</u>	<u>\$581,970.67</u>
Mill Labor.....			233,682.35
Operating Expenses:			
Overhead Expense.....		\$93,867.20	
Supplies.....		16,390.04	
Depreciation on Mills and Equipment.....		11,345.22*	
Taxes.....		13,892.43*	
Repairs.....		12,653.12*	148,148.01
			<u></u>
Total Mill Cost.....	27,382,726	\$35.20	\$963,801.03
Less: Inventory Variation:			
Inventory, December 31, 1920.....	5,404,726	35.20	\$190,246.36
	<u>21,978,000</u>		
Inventory, January 1, 1920.....	2,375,280	33.00	78,384.18
	<u>24,353,280</u>	<u>35.00</u>	<u>\$851,938.85</u>
Cost of Sales.....			

* To be shown separately on the return; included here to indicate how the inventories have been computed.

CALCULATION OF INVESTED CAPITAL

Capital Stock and Surplus:		
Preferred Stock.....		\$800,000.00
Common Stock (no par value) issued as bonus in connection with sale of preferred.....		
Earned Surplus.....		769,778.59
		<u>\$1,569,778.59</u>
Changes during year:		
Dividend (10% on Preferred, February 15, 1920, 321/366 of \$80,000).....	\$70,163.93	
Federal taxes paid (.42144809 × \$301.60028).....	127,108.86	197,272.79
Invested Capital (net).....		<u>\$1,372,505.80</u>

COMPUTATION OF TAX

Since net income is greater than 20% of invested capital, and invested capital is greater than \$71,428.57, the following formula may be applied:²

$$46\% I - (5.04\% C + \$740) \\ \$275,094.31 - (\$69,174.29 + \$740) = \$205,180.02$$

COMMENTS ON PROBLEM

1. Form T properly filled out must accompany the return. This form is the joint product of the Treasury Department and the National Association of Lumber Manufacturers. Among the points of information called for are: maps of all timberland showing thereon timber cut during the year; details of additional investments in lands and timber acquired during the year; calculation of depletion deduction claimed; and calculation of the inventory at the end of the year.

2. If depletion is based on individual species within a given tract or "block," a separate account should be carried with each species. The block is defined as an operating unit the timber from which goes to a single point of manufacture or is moved by a single logging development.

3. March 1, 1913, values in the case of properties subject to depletion *must* appear on the books of the taxpayer if depletion on enhanced values is to be claimed. Any increase in values after that date cannot, of course, be taken advantage of unless the ownership changes. Land values must be separated from timber values, and the latter having been once determined cannot be changed. The only change that may be made is in the unit depletion charge due to changes in the estimated number of units remaining uncut; but the changed estimate cannot be made retroactive. It applies only to the year when the re-estimation is made and to years following.

4. Surplus arising from putting March 1, 1913, values on the books cannot be included in invested capital except to the extent that it has been realized by charges to operation in excess of the property cost.

²See *January Administration*, page 111, for list of formulas for tax computations.

Thus it may be noted that approximately one-third of the original capital surplus has been transferred to earned surplus at January 1, 1920, and that by the time the logging operations have been completed the entire amount, excepting that offsetting increased land valuations, will have been so transferred.

5. Two questions on realized appreciation as yet remain unanswered in the present regulations of the Treasury Department. These are: Should realized appreciation be transferred to earned surplus when the timber is cut rather than making the transfer when the logs or lumber are sold? Should appreciation realized during the taxable year be excluded from invested capital for the same period? Both of these questions will probably be answered in the affirmative.

6. Total lumber sales (24,353,280 ft.) may be assumed to include shortages or overages in the manufacture of lumber. On account of the standard method of computing log-feet, the finished product (lumber) may exceed the original estimate. Cruisers' estimates and log-feet are not actual measurements and considerable variation may be expected.

7. Lumber manufacturers may apply average cost during the year to their inventory of lumber on hand at the end of the year [Article 1585 (b)]. In the problem the average cost was found to be \$35.20 per M. This may be applied to the quantity of each species on hand or the manufacturing cost may be distributed to the various species in proportion to their selling prices. In this case, average cost has been taken. This would always be the method used where but one species had been manufactured. This inventory method may be followed only by lumber manufacturers.

VIEWS AND REVIEWS OF BOOKS

MAKING ADVERTISEMENTS AND MAKING THEM PAY

By Roy S. Durstine. 264 pp. Charles Scribner's Sons

REVIEWED BY HUGH M. BLAIN*

Does advertising pay?

This is the question asked and answered in this book—sensibly, informally, and with all the knowledge of the trained expert. And not only does the author answer this question—he goes further and gives specific directions how advertisements can be made to pay, showing the copy-writer what his object should be and how to attain it.

Thus the book has two angles of approach—that of the man who writes advertisements and that of the man who pays for them.

After showing in his first chapter that advertising is something more than merely “stringing sentences together and finding somebody to draw a picture,” in Chapter II the author takes up the question, “Which comes first—copy or illustration.” Here we are brought behind the scenes and shown such ways as:

Some men's minds work in terms of layouts, some only in terms of copy—and some apparently do not work at all. But if the combination of layout and copy can progress together in this way the result will have a much greater chance of being a unit.

There is a famous magazine illustrator who laughs because people often ask him which come first—his pictures or the stories they illustrate. He patiently explains that there can't be any illustrations until there is something to illustrate. By the same token there can't be a picture for an advertisement until there is an advertisement that needs a picture.

. . .

Possibly the best rule to follow in an illustration is to be sure that it tells a story. If the explanation can be thrown away it is a mighty good picture. But sometimes there is unfortunately no story to tell in the picture, if the artist can judge by the copy furnished to him. He is then in the position of the actor who was

* Advertising Manager of the Associated Rice Millers of America, Inc., New Orleans, La.

confronted with carrying out that famous stage direction in an eminent British playwright's drama—the one which says, “Enter in the manner of one who has just had a cup of tea.”

So he does his best to decorate the advertisement instead of illustrating it. His decoration may be effective, but at best all it can hope to accomplish is to shout to the public: “Come and read this! I don't know what it's all about, but I'm here to catch your eye, so look this way!”

Or he may play safe and draw that picture of Mrs. Housewife and Mr. Dealer, or the crowd out at the country club, or the family at dinner, or the factory beside a winding river, or two men talking across a desk, or the bride doing her housework, or any other one of the good old dependable subjects that have advertised everything from food to fashion. If a picture is going to tell a story, why not have it tell just one story instead of a whole news-stand?

One of the greatest shortcomings of today's advertising, according to Mr. Durstine, is its rubber-stampism, its lack of individuality. He asks such pertinent questions as:

Is there any reason why nine out of ten jewelry establishments should have advertisements which are so alike in border, in design of type, in phrasing, that you could lay your hand over the signature and defy any one to tell you the name of the signer? Is there any reason for the pompous formula of so-called “institutional” advertising—the picture of the plant or of the founder or both, at the top; the solemn and resonant paragraphs protesting of the house's virtue and long years of faithful service to the American people? Switch the signature and all these handsome tributes to themselves might be spoken equally well by makers of condensed milk or automobile tires or baked beans or paint or men's clothing or any other houses with long and honorable histories dating back to an incorporation prior to 1900.

Later in the book he gives the answers in the following characteristic paragraphs:

A writer of fiction may work all of his days, if he likes, to develop a style of his own. But a writer of advertising must work all of his days, and most of his nights, to develop a different style for each customer.

It is perfectly simple when you stop to think of it. An advertisement should look and sound like the firm which signs it; not like the man who writes it. It should catch the spirit of the advertiser's personality and should reflect that personality in words that create a proper picture. It should create this picture so simply that many will grasp it, some will talk about it, and a few will act upon it.

An exclusive jeweler may say: "Your inspection is invited."

A garage-keeper may say: "Come in and look us over."

The words used in the jeweler's invitation help to create a picture of dignity, taste, and luxury, with a little aloofness as befits an establishment where everybody isn't welcome. The words used in the garage-man's invitation give you a picture of a man in jumpers wiping his hands on a piece of waste. Try interchanging the two invitations and see how inappropriate they become.

One of the most elusive elements with which the advertising writer has to deal is atmosphere. This topic is treated somewhat as follows:

The looks of an advertisement are like the looks of a salesman. There was a day when merchants cared very little how their sales people dressed and acted. Today there are fixed standards of clothes and manners.

Similarly, there was a time when mighty little thought was given to the choice and arrangement of type, to the balance of picture and print, to the illustrations, technique, and the copy's character. But today it is realized that first impressions are even more vital in an advertisement than in the appointments of a shop.

A clever salesman can win you around even though you may be unfavorably impressed by his store, when you first enter it. But if an advertisement's appearance repels you, or even fails to attract you, the advertiser has lost his opportunity with you once and for all.

A famous merchant sums up the duties of his advertisements in this order: Be seen, be read, be believed, be convincing.

If a manufacturer of wrenches were to choose a fastidious face of type, associate it with a dainty border and a delicate drawing, your first glance at his advertisement would say to you: "This must be an advertisement of a sachet powder."

And no matter how vigorous and man-to-man

his argument might be, you would refuse to believe that it was selling wrenches. And you would be right; it wouldn't sell them.

Every business, no matter how young or how old, has a personality. To catch the spirit of that personality and to reflect it in words and type and picture is the job of every advertisement.

If a man is selling an automobile costing several thousands of dollars, he refuses to admit that his car has anything so plebeian as an engine. He emphasizes the little comforts of upholstery and fixtures. He gets you into a luxurious frame of mind when you see his advertisement just as he does when you enter his salesroom.

In his advertising he does it by using color pages in the magazines where he shows you the exquisite work of the best available artists. His car is incidental. The foreground, peopled by the idle rich, may be a club window or a country club lawn or a famous church.

His message may be confined to a dozen words or even no words at all—just atmosphere.

But atmosphere is not confined to those who buy the art work of the Michael Angelos of our time. Atmosphere is not merely a question of a four-page color-insert describing and picturing the beauty of a pipe organ in the home of a millionaire.

Obviously the test of good advertising, from the standpoint of atmosphere, is whether it is in character with the product which it seeks to sell.

If there were nothing else in Mr. Durstine's book than his chapter on "Sincerity," it would be well worth reading, as the following extracts will show:

All the sparkle and persuasion and drive of good advertising copy comes when the person who wrote it was so filled with belief in his subject that he couldn't wait to get his enthusiasm down on paper. If there is one quality that least can be spared from copy it is sincerity.

You can strip an advertisement of almost anything else—beauty of form, clarity of expression, taste of arrangement, excellence of idea—and still you will have something left, something that will reach out and grasp people, if your advertisement rings true.

People often point out the great variation between the advertisements of two successful advertisers.

"Which one is good advertising?" they ask. "This one violates every standard of taste and yet there is something about it that gives it as much power as that beautiful advertisement."

Sincerity is the reason. Two advertisements may be as different as a subway guard and an Episcopal bishop and yet each one will make its appeal. Advertisements are like people. If a

man is sincere you can forgive him almost anything. One salesman comes to see you with a manner that is so abrupt or so shy that your first impulse is to tell him to go out again into the rain which drove him into your office. And yet if he is sincere, if he honestly believes in what he is selling, and you give him half a chance, he will probably leave as good an impression with you as the man whose manners carry a high polish.

It's equally true that a lack of sincerity can ruin the best materials ever used in the construction of an advertisement. Take a drawing made by an artist whose technique is faultless but who has the idea that he is going slumming whenever he dips into commercial art, combine it with a few vapid words by a writer whose chief interest in the advertisement is to finish it before lunch, have these words put into type and the two elements arranged by a designer whose life is spoiled because he didn't think of making Type Charts before Ben Sherbow did, and what do you have? A pleasing advertisement, perhaps, representing several hundreds of dollars in its manufacture and several thousands in its progress to the public eye through magazine space, but without a flicker of spirit and life and what has been latterly called jazz.

There ought to be something about an advertisement as contagious as the measles. Without sincerity an advertisement is no more contagious than a sprained ankle.

In the chapter entitled "Common Sense" appear such detached ideas on advertising methods as:

The most successful advertising campaigns always seem to be those which are founded on a perfectly simple idea—just the application of common sense to selling.

If you want people to write to you for one of your booklets, it's been proved that the very best way is to display a picture of your booklet at the top of your advertisement with a headline not about your product but about your booklet. That is only common sense. And yet many advertisers who put their booklet offers in very small type at the bottom of advertisements wonder why they don't get more inquiries. If a shop-keeper wants inquiries about an article, he displays it in his window. He doesn't hide it under the counter at the back of his store. If an advertiser wants inquiries, and still more inquiries, he can get them if he devotes enough of his space to his offer. Whether it is always wise to go out after inquiries is another story. The point here is that if a man wants them, all he needs to do is exercise as much common sense as he would if he were dealing with people face to face.

One of the soundest ideas developed by the psychologists of business is concerned with this question:

When is it necessary to go into detailed reasons and when can advertising simply be a reminder? Frank Fehلمان tells us that reasons must be given if you are talking about something new to the present generation; but if you are advertising a product which our fathers and grandfathers used there is no necessity for the reasons why.

Thus you must go into details if you are selling a refrigerating system or a dictating machine. But if you are selling soap or tea or bread, you needn't stop to argue—just remind.

Certainly no one will quarrel with the general principle of this idea. In fact, it wasn't necessary to hold laboratory tests to establish it.

If a person who has never written an advertisement were asked to prepare two pieces of copy—one about a cake of yeast and one about a typewriter—wouldn't he instinctively go into more details in describing the typewriter than the yeast? Wouldn't his intuition tell him that more people knew less about the way typewriters work than about the way yeast works?

A point which the author never tires of insisting on is the necessity of the copywriter's knowing the business he is writing about. Somewhere in every business, he contends, is an idea so simple and tangible that the public will respond to it, and it is the advertising man's job to find that idea and then to use all the skill and technique and ability at his command to translate that idea into terms which the public will understand and like and want. Of course there are many ways in which to write advertisements. Mr. Durstine instances three. One way is to read all the printed matter previously written about a subject, go through all the scrap books of advertisements already written, and then rewrite the material thus obtained. Another way is to depend upon inspiration. But the third way is the one recommended by the author—"to start fresh."

See the factory. Try the product. Learn to know the men who make it. Try it out on people. Find out for yourself how good it is. Get excited about it.

Then, instead of having a campaign seem like a chore that must be done, it will simply be a question of how soon and how fast you can get your ideas down on paper.

In the newspaper business it is recognized that a man who gets his facts at first-hand can write

with infinitely greater vividness than a man who doesn't. Men in the office are sent out on assignments to see and hear with their own eyes and ears.

Many advertising men have come to believe that a lot of sincerity and strength may be missing from advertising copy if one man talks to the advertiser and another man writes the copy. All the fire and inspiration of personal contact is lost. Instructions are often misinterpreted. Too frequently the object is to get an O. K. on an advertisement rather than to make it sell merchandise and create an accurate picture of the business's personality. Certainly it is safer to say that a sincere note will be obtained at first hand.

One of the most vital things for an advertising man to remember is that he must never let himself lose the viewpoint of the consumer, and in illustration of this point the author tells the following story:

An advertising man was invited to talk to the vice-president of a bank about his institution's advertising. They had several talks and the plans were taking shape.

One day the advertising man walked into the bank with a very fat book under his arm. It was an exhaustive reference volume on the methods and practices of banking.

"What on earth are you going to do with that?" asked the banker.

"I'm going to study it," was the answer. "Then I won't have to ask so many questions."

"Yes, and then you won't be any better off than we are," said the vice-president. "Ask us all the questions you want to. But don't get smothered in technicalities. We want you to keep on thinking like a depositor—not like a teller."

So the book was never read. And the advertisements were.

In his final chapter on "Where is Advertising Going?" Mr. Durstine professes to see a loosening of the grip held on business by personal salesmanship.

A mediocre idea brilliantly presented may seem plausible and even promising when the presentation is made by a dominating salesman, but when it goes before the public without the benefit of its sponsor's eloquence the promise is rarely fulfilled. And when this has been repeated a few times the advertiser thinks more of his dollars than he does of the charm of an eloquent salesman. With the disappearance of superlatives from copy has come a demand for quiet convincing argument with something more behind it than a heavy fist accustomed to rough work on mahogany desk tops.

With a better understanding thus promoted will come a more intelligent use of advertising in lines where growth seems to have been stunted.

When the banks discovered that they could advertise their services without loss of dignity, a new day began for financial institutions and the hardest blow in history was struck at the get-rich-quick promoters. For advertising meant the public's increased interest in the handling of money, and with greater interest has come more knowledge and protection against skilful snares.

One of the best New York agencies specializing in financial accounts has watched the signs of the times and is equipping itself to sell bonds and banking service just as bread and spark plugs are sold. It used to regard the preparation of advertising copy as something confined to the up-town agencies, but now it is employing only writers who have had general experience in advertising merchandise.

When great industrial houses, such as makers of factory machinery and equipment, learned that they could afford to reach through general advertising the young executives of today who would be the chief executives of tomorrow, they proved the value of a new application of advertising.

Yet there are whole industries which are still in the doldrums. Many of them continue year after year to make the same mistake: they use their advertising to talk about what they sell instead of talking about what their products can do for the people whom they want to reach.

The author makes a rather strong plea for co-operative campaign as intelligently planned and faithfully executed as the collective campaigns of the citrus fruit-growers of the West, the florists, the lumber dealers and more recently the railway executives, the canners, and, yes, the churches of the country. He continues:

Advertising in the next few years will see many more campaigns of common interest unless all the signs fail. There is a marked tendency among institutions of many sorts to say:

"Here we have a story too big for any one of us to tell alone. Anything that benefits one of us will benefit us all. The public has never been told what barriers we have surmounted, what accomplishments we have reached. Let's not boast; let's explain."

There is much to be said for the collective campaign. It offers an opportunity to speak for a whole industry and many a man will permit his industry to describe a situation of which he alone would hesitate to speak. The burden is

carried on many shoulders and there is progress without individual hardship.

If one fruit-grower were to spend a few cents per crate in single-handed advertising, he wouldn't spread his story far beyond his own doorway. He would be in the position of the retailer before the day national advertising helped to make any real impression upon the public's buying habits. But several thousand fruit-growers, pooling their few cents per crate, can make a market. And the opportunity which has been realized by the co-operative few will be seized in coming years by many more industries.

For a business book the present work is out of the ordinary in several ways. One of these ways is the fact that the style is tinglingly alive, from the first page to the last, and it is safe to say that the average reader will not skip a line. Secondly, the writer has vision and imagination and

therefore does not allow himself to get so close to his subject as to lose his perspective. And thirdly, he has humor, the real down-right article.

A valuable feature of the book is the series of cuts of actual advertisements, showing how advertisements should be got up, and in the text are various examples of how they should not be.

The quotations given in this chat about the book are merely a few samples of its rich contents. For the rest the reader must be referred to the book itself.

Mr. Durstine out of his large practical knowledge certainly throws a great deal of light on his subject; and incidentally in the course of his discussion he gives a concrete illustration of what advertising is expected to do—he sells the idea of advertising itself.

THE STENOGRAPHER'S MANUAL

By Edward Jones Kilduff, Professor of Business English, New York University; Author of "The Private Secretary." xi, 172 pp. Harper and Brothers

REVIEWED BY L. C. WILSEY *

During the past ten years many books have been printed on the subject of better letters—books that attempted to tell the correspondent or dictator how to make his letters more effective. The second member of the team, the stenographer, has been sadly neglected; but certainly if the stenographer or typist does not do her share of the common task, the efficiency of the letter is decreased. What dictator reading and trying to correct the sometimes unrecognizable remains of the letter does not recall this fact?

In this volume Professor Kilduff amply makes up to the stenographer for all past neglect. He tells her in a heart-to-heart fashion just what the business executive would like to tell his own stenographer if he had the time—or possibly the courage—to do so. He tells her why she must be accu-

rate in her work; why she should take pains to put out attractive letters; why she should observe office rules—and the other things a good stenographer is supposed to know, but often does not.

The qualities that make a good stenographer are listed as follows:

1. Accuracy
2. Agreeable personality
3. Trustworthiness
4. Diligence
5. Judgment
6. Good deportment

In commenting on the fact that the good stenographer is trustworthy, Professor Kilduff says:

The stenographer is in a position of confidence, and she should recognize it as such. Whatever she learns from her dictation or from her position of trust in the office she should consider confidential, and should not speak of it to others—not even to other people in the office. Much trouble

* Formerly Correspondence Supervisor of the General Motors Export Company, New York City.

has been caused in business offices by stenographers telling one another information of a confidential nature. Don't gossip about the contents of your letters or about what you heard the employer say. Be discreet; keep these things to yourself. Show your chief that you are discreet, that you can keep a secret, that you are worthy of trust—do these things and the chief will rely more and more on you, secure in the knowledge that you can be trusted.

The good stenographer is loyal to her chief. In all her actions she has the best interests of her chief at heart and he knows that he can place implicit trust in her. She may know his faults and shortcomings, but she keeps them to herself—she never disparages him to others, but sticks up for him when others disparage him.

The good stenographer is reliable. Her chief can trust her to do her work without supervision. If he leaves the office he knows that she will go on

doing her work as if he were there. She is reliable in her work, in her statements, and in her conduct.

In addition to chapters of instructive character on why the stenographer should not compel her employer to read his letters word for word, lest he be made to appear to have said something he did not say, this little volume contains reference chapters on such matters as the mechanical make-up of the letter, spelling, misuse of words, and punctuation.

The book is the kind that the employer can hand to his stenographer with the remark, "Take this book, read it, and then put it into practice." If she does, one of the causes that make "the tired business man" more tired will have been remedied.

CAREERS FOR WOMEN

Edited by Catherine Filene. 576 pp. Houghton Mifflin Co.

REVIEWED BY ALLAN NEVINS*

"Help Wanted, Female"—this heading covers a field that has expanded until it is all but as large as the field for men. Not many years ago one found in the short columns under it nothing but positions offered for stenographers and bookkeepers, demands for nurses for a few weeks' engagement, places for dressmakers and milliners, and an occasional call for a "companion"—a good reader, shopper, and helper in travel. Everyone knew in addition that women crowded the elementary ranks in the teaching world, and that a few eccentric souls were doctors or even Portias at the bar. Now the distinction between male help and female help might seem in danger of disappearing. There is nothing which women do not undertake. In this volume a full two hundred different callings are listed and described. At that, several in which women have made a conspicuous success are omitted. For example, nothing is said of the woman preacher, though it would seem that the distinguished

career of a pioneer in just that profession, Anna Howard Shaw, would have called special attention to it. Nothing is said of the actress, though many young women attempt a stage career. Moreover, each description of a calling here is written by a woman who has gained success in it.

It is true that women are just gaining a fighting lodgment in many professions and businesses. "There is still prejudice against women advertising managers in some quarters," says Dorothy R. Entwistle, of Filene's in Boston. "The argument is advanced that men do not like to work for women." The greatest disadvantage in public accountancy for women, declares Lena Mendelsohn, of the American Institute of Accountants, "lies in the present attitude of the public, due to its lack of confidence in woman's business judgment and experience." The unfounded belief that a woman must necessarily lack quite a man's value in the combination of brains, determination, and strength, to some extent makes entrance to any calling difficult; but it is chiefly felt in militating

*Member of the Editorial Staff of *The Literary Review*, New York City.

against advancement. "Women seeking surgical apprenticeship under men," says a successful woman surgeon, "must as a very general rule continue to occupy subordinate positions." Many women now work as clerks in employment offices. "But," says one who knows their trials, "few women occupy the position of employment manager, at the head of an office, though there is no reason why it should be denied to women of the right type." Until more women—many more—have made conspicuously fine records, this prejudice will be decidedly felt.

But every contributor to this book believes that the outlook for the future of women's work is bright. For one factor, the evidence is clear that women are pouring into the professions, and especially into business, in numbers ever larger compared with the total of workers. Within the next two years, says an advertising agent, the women in that calling will undoubtedly be doubled. At present not more than a score have found work as resident representatives of American firms abroad—either as sellers of American goods or buyers for general importers, department stores, art dealers, and so on. But one woman writes from Paris that the increased interest in Europe that has followed the war will swell the contingent of such representatives fast. There is a good opportunity for women to establish clienteles of their own as public accountants and several have already done so in New York.

To turn to another business, just now there are few women acting as bond sellers. In all New York there are about twenty-five, though there are thousands of women investors. One saleswoman connected with the Guaranty Trust Company informs us that there must be many more in the future, "just as there will be a great many more women engaged in all kinds of business-producing jobs." The war gave a marked impetus to some employments for women. For example, it created a demand for the trained dietitian which it has been impossible to meet; one college official recently said that his institution had requests for at least six times as many dietitians as it graduated

It is into the departments of pure business that the rush of women seeking responsible positions has been most striking. Women have long been teaching; they have long been found in literary fields, writing, editing, or at least proofreading; they have been known in medicine since the time of Emily Blackwell; they have felt a natural instinct for social work and household science. No successful woman in any field will dogmatically say that it is best for a girl to go into this calling or that. On the other hand, all such women will declare that a girl should follow her individual bent, whether it is toward banking, photography, or bee-keeping. The physical strain which a working woman must undergo is sufficiently severe without adding the mental strain of labor in an uncongenial occupation. For this reason, the widening range of choice is a great boon. But this book, in which leaders in each occupation explain or at least hint what rewards it offers, shows why the multifarious activities we call business have been especially alluring. After personal taste is satisfied, all women want the work promising most activity and usefulness and the best remuneration. It is clear that, with a few possible exceptions, business offers the best money reward.

In advertising, women are told that \$10,000 a year is by no means out of reach, and that salaries of from \$2,600 to \$4,000 are not uncommon after six or seven years of work. Publicity specialists are promised, if efficient, \$1,600 a year to start, and a general maximum of \$5,000. The department store occupations afford a wide variety of opportunities, some exceedingly attractive. The average buyer's salary is from \$2,600 to \$4,000 a year, but the maximum runs up to \$8,000. The head of a "comparison office" may even get \$10,000, and it is said that such offices are fast increasing in number. As the name indicates, the comparison office is responsible for keeping the store's buyers and merchandise managers acquainted with competition, and must be always ready to report on goods, prices, styles, service, and up-keep in its own establishment and in rival's. A professional shopper may easily rise to head such a department. There is room

for women in the advertising bureaus of large stores, where copy-writers and artists may command as much as \$4,000. The educational director in stores, we are told, receives from \$1,500 to \$2,000 at the start, and after years of experience a few have reached \$4,000 to \$5,000. The demand for directors greatly outruns the supply, so that the Prince School has usually placed all students before their graduation. For the style expert "the average salary is between \$5,000 and \$10,000." For the specialist in textiles, salaries of \$5,000 to \$7,000 are not unusual.

How does this compare with the money reward for the best positions in teaching, social service, or library work? Very favorably, of course, and women to whom money is an important consideration perceive the fact. And there are other attractions than mere dollars. Advertising, for example, is not humdrum, but enlivening. Business trips are frequent; some great stores even send their advertisers abroad; and the advertising woman comes into contact with live men and with novel business methods. If the work is with an agency, not a mercantile house, it gives the woman engaged in it at least a superficial knowledge of many businesses and industries, and its change and novelty are fascinating. The financial advisor—women are just entering this calling—can also boast of variety, contact with business leaders, and pleasant surroundings. Women specialists in business are being heard of with more frequency. Among them is the research worker in foreign trade. The financial return in such a novel undertaking, where the advantages of the service may be little understood, is not large. But one of the few women engaged in foreign trade research, Ellen B. Lewis, asserts that she can imagine nothing less routine: "To develop proper sources of information and to keep abreast of market conditions both here and abroad, the worker must constantly make new acquaintanceships and meet people of every race and creed and line of business." The work of a business office is confining, but so is teaching school or librarianship; and we dare say that there are thousands of business women who rejoice in the contact with large affairs, the

close association with intensely practical undertakings, that business gives them. While recognizing the high dignity and service of teaching and some other long-established callings for women, they would find them irksome.

It is interesting to note the evidence in this volume of special effort by schools and colleges to train the modern girl for a wide variety of expert occupations. Women are now expected to form a considerable portion of the classes at institutions like the College of Business Administration in Boston, where advertising is taught in evening courses. Landscape architecture, not long ago exclusively a man's profession, is now offered in five good schools open to women—Cornell University and the Universities of Illinois and California being coeducational, while the Lowthorpe School and the Cambridge School are exclusively for women. Practically all medical schools are now open to women; Harvard is an exception, but even Harvard has appointed a woman to an associate professorship. Only a few great law schools now exclude women and a determined effort is being made to force their doors. Women have long since become numerous in the courses—chiefly postgraduate—in employment management given at a long series of universities and colleges, including Bryn Mawr. Schools of journalism are filled with women. The training which these women take is precisely the same training given to men, and they are imbued with a feeling that they may expect to achieve as much as men.

In business fields most of the training comes by apprenticeship and experience. Women are warned that in bond salesmanship they are not likely to be worth even \$25 a week during the year or more in which they are building up a clientele. In advertising, even the college-trained girl usually finds it advisable to devote a year to gaining general business experience before she tries to enter on her "career"; if she is fortunate, she may sometimes start at once as a copy-writer. The professional shopper can hardly take any formal course of direct value, unless it be such a course in textiles as Columbia offers; but by long experience she must become acquainted

with merchandise in every line and know a good value the instant she sees it. For the private secretary, says one who holds an important position in Washington, "schools and textbooks have their rightful place, but only by actual doing can one become an efficient and valuable private secretary." Even the railway clerk, well posted on such matters as the Interstate Commerce Commission classifications and special railway codes, ought to have a practical office knowledge of typewriting, comptometry, or accounting.

This volume spreads an alluring array of possibilities before women, some of which would never be thought of by the ordinary citizen. The demand for well-trained women detectives, we are told, always exceeds the demand, and the right woman can earn good wages—\$4 to \$10 a day, with expenses—even while serving her apprenticeship. A girl who likes outdoor work might consider raising the commoner drugs, seneca, snakeroot, ginseng, golden seal, and spigelia, for the market is brisk. Women with a dramatic instinct, but without the physical endowment of an actress, may be interested in directing pageants. This is an alluring occupation for those with a sense for the graphic representation of history, and pays as much as \$300 a week when employment is found, though such payments are of course intermittent. The Smith-Lever Act created positions for about a thousand local demonstration workers in domestic science, with salaries ranging from \$1,200 to \$3,000 a year. Other women in whom the impulse toward dealing with foods and household affairs is strong may find varied occupation. They may instruct the poor in foods for some social center, manage a restaurant, set up as household efficiency expert, preserve vegetables and fruits for sale, or direct a community information bureau upon clothing and textiles. A number of states now employ women in such bureaus.

The would-be literary worker need not feel herself restricted to newspapers, magazines, or publishing houses, for women are making good livings as translators and others as professional genealogists. Jessie Fremont Emery is at pains to defend genealogy from the charge of being a fad. In

arts and crafts there are such unusual openings as that for the garden photographer; in science, as that for the teacher of plant pathology; in social work, as that for the occupational therapist; and in education, as that for the registrar. Of deans of women there are an increasing number, for not only colleges and universities have them, but high schools. But deans are more often born than made, and Dean Lord of Goucher College is right in laying emphasis on personal qualifications, from sound social judgment to dignity. The same rule holds true of women in politics. Mary Garrett Hay assures readers that a woman may even become president of the United States, but a rare combination of personal traits is required of the woman who would rise high in statesmanship.

The plan of this book involved sharp limitations. It is impossible to tell much about an occupation, its advantages and disadvantages, its money rewards, the training and the personal qualifications required, in three pages; and the average here is less than three. It is no real criticism of the work to say that it often seems superficial, for it had to be. Depth and thoroughness were sacrificed to comprehensiveness. A more valid objection is that it is frequently repetitious. In compiling her volume, Miss Filene asked each of the two hundred contributors to prepare her essay according to a definite schedule covering the points named above. Many contributors wrote upon the "qualifications desirable," for example, in a conventional way, and more often than not, they name just about the same qualities—health, tact, alertness, and so on. Some of the chapters are in themselves, and after all allowance is made for the unescapable brevity, unsatisfactory. Probably little that is useful could be said upon playwriting for women in a page and a half, and at any rate Rachel Crothers fails to say it. Miss Mabel Rollins, the able conductor of *House Beautiful*, has written well upon editorship, but certain of the sections upon newspaper work are decidedly inadequate. Mary N. Winslow, of the Labor Department, tells us just enough about civil service opportunities for women to whet our appetite for more, and does not

even add the brief note which would tell where the further information is obtainable. But on the whole, Miss Filene has done women contemplating the field of work in perplexity a real service. Her

book should greatly aid the Intercollegiate Vocational Guidance Association, and the Intercollegiate Conferences, in seeing that more women walk clear-eyed into their life work, and fewer drift there.

FACTORY MANAGEMENT WASTES AND HOW TO PREVENT THEM

By J. F. Whiteford. x, 220 pp. Nisbet & Co.

REVIEWED BY WILLARD C. FISHER*

It is a good omen for the future of industry that employers are giving more and more thought to their workers and to the terms under which they are taken on and the conditions under which they are set to work. Some measure of exaggeration, perhaps, was implied in Edward A. Filene's declaration of his hope that, after the great war and its upheavals, American employers might "begin to put as much hard thinking into the problem of men as they have put into the problem of machinery." For it will not do to hold that there had been no beginning in the humanizing of American industry before the war. But certainly employers formerly did make too light of the purchase and utilization of labor. And now more than ever before there is evidence of the employer's recognition that, if he is to succeed in the sharp competition of present-day industry, he must give his best thought, in selection, purchase, organization, and continued adjustment, to all of the agencies which he utilizes, and not to the inanimate and mechanical ones alone.

The continued appearance of business books—books for the business man—which discuss one problem or another of the employee must be counted as one clear evidence of this fortunate situation. And among these an interesting place is taken by Mr. Whiteford's recent English book on, "Factory Management Wastes."

Whatever may be its merits as a general discussion of its professed subject, it will not fail to command attention by the directness and emphasis with which it declares

and declares again the supreme importance of the human factor in industrial production. "The human element will always remain the most important feature of industrial enterprises, irrespective of the plan of the administrative organization" (page 95). "When we examine the situation thoroughly, we find that we do not, in fact, can not manage inanimate objects. The term, 'manage,' is applicable only in connection with beings capable of self-determined action. Human beings are managed, so that the important factor, the only factor in management, is the human factor, the human element" (page 14).

Here, it may be said, is an entirely arbitrary definition, and one which is unfortunately narrow in its formal restrictions. And, in fact, it will be found that Mr. Whiteford himself is not able to adhere to it closely in the development of his subject. But, at least, it gives us an estimate of the importance of the human factor in industry which would not be particularly noteworthy if made by some extremist among labor radicals but which is highly significant in this book, as coming from a mechanical engineer, an expert in management, who is pleading only for greater efficiency in industry.

The scope of the book is neither so broad as might have been inferred from the bare title nor so narrow as might have been expected after the author's restrictive definition of management. One naturally might have expected a treatise on factory management wastes to cover the subject of factory wastes generally; yet there are enormous factory wastes of which little account is

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taken, or none at all. No small part of the book is devoted to topics which are not within the field of management, as the author defines it, such topics as "materials," "machinery," and "cost finding," so that less space is left in the small volume for the distinctly human matters of "wage-systems," "overtime," "profit-sharing," and the like. Moreover, there are other and vitally important subjects which are either passed over with a word or are not even mentioned, as "labor turnover," "hours of paily labor," "weekly rest," "collective bargaining," "welfare work," "labor unions," "employee representation," etc.

Nearly or quite all of the topics which are selected for treatment are presented so briefly, in terms so sweeping and general, that the ordinary reader will be helped but little by his reading. The chapter on "the principles of wage payment," is conspicuously good, with its seven fundamental principles, each definitely formulated and followed by concise comment. But it is not easy to see how one who does not already understand the common forms and principles of efficiency wages can learn anything from the short and very incomplete chapter on "wage systems" (pages 166-180). And such brevity is especially regrettable in a writer whose doctrines often run strongly against the common prejudices and convictions of the readers whom he addresses. For Mr. Whiteford has only disapproval for overtime, long hours, and the customary methods of determining labor standards and piece rates.

A more serious fault than mere brevity occurs from time to time in statements for which it would be difficult to find any sort of justification and which, therefore, must be pronounced essentially misleading. How could a mechanical engineer, of all men, come to the conclusion that "the generation of power has reached a high degree of efficiency" (page 77)? It is going much too far to insist that the interests of employer and employee are "identical" (pages ix, 158). One need be neither an economist nor a practical business man in order to see that it would be quite impossible for employers to "make provision for the employment of all who may be temporarily inconvenienced" (page 62) by the introduc-

tion of labor-saving machinery. And it is not at all the mere displacement of hand labor by machinery in modern industry against which complaint has been made, as "dehumanizing" workers (pages 62, 88). Rather it is the narrow monotony of the worker's task, whether this be accomplished with or without the use of a machine.

With thoughtful readers Mr. Whiteford will also discredit himself somewhat by his proneness to exaggeration, to overstatement, through which sometimes he falls into amusing inconsistencies. In one place he holds that "almost all the labor troubles throughout the world" have been caused by "the absolutely unscientific, if not immoral, manner in which standards of work have been determined" (page 153); while in another place (page 95) he declares that "the majority of labor difficulties" have been due to "fatigue imposed on executives by the absence of suitable organization methods of affording relief."

Yet, for all of these and still other faults, it must not be supposed that the book is without value. All too curt though most of the statements are, and questionable though some of them must be pronounced, there are many which must catch and hold the attention of the reader and which will be found, in last analysis, to carry important and neglected, or unknown, truth. Some of these are well calculated to stimulate the alert business man, at least to the extent of inducing him to call in an expert in management. Possibly the author intended no more.

But the subject of factory wastes, and the other industrial wastes which should be considered with them, since all are substantially similar both in origin and in financial consequences, deserve a much fuller treatment than Mr. Whiteford has undertaken to prepare. By waste he quite properly understands any failure to follow the best known ways or to make the best known uses of industrial forces, material, or equipment. And if there were no other industrial wastes than those which he recognizes, then a book of 220 pages of large type and broad margins would not be large enough to permit a valuable discussion, together with helpful suggestions for prevention. But there are other wastes also,

numbers of them, of substantially similar financial and economic significance. Indeed, these are to be seen in every direction, if one will but look attentively for them. Probably there might be a yearly saving running into the billions of dollars for the United States alone, if every business man in the country could be brought to adopt and follow the practices which have been proved the best in his own field of operations.

High as such an estimate may appear to those who have made the complacent assumption that in the United States, if nowhere else, business is done in the best possible ways, at least in the most efficient ways, it is well within the truth. For there are frightful wastes in every field and stage of modern industry. In fact, the extent of enormous waste is even broader than the whole range of industrial activity, as industry commonly is understood. It is as broad as the whole field of individual, family, business, and social economy. Many of the industrial wastes are found in connection with the personnel of industry, in the labor force, in what Mr. Whiteford chooses to name the human relations and to make the subject of his book. But many there are also on the technical or material

side, so many, indeed, that he cannot refrain from mentioning some of them, even after he has formally limited himself to a consideration of the relations between employer and employed.

Some idea of the magnitude of the current wastes in American life may be had from the fact that in the one industrial operation in which Mr. Whiteford believes that a high degree of efficiency has been reached, that is, in the generation of power, the waste in this country each year is not far from one billion dollars. There is approximately the same amount of waste each year in the household economy of American families. And, be it ever remembered, in such estimates it is assumed merely that all might do as the most capable and the least wasteful now do. The estimates do not rest upon the discovery of any better methods or principles than are already known and tried.

It is not unlikely that, if only America would put an end to the wastes which America knows how to avoid, the entire burden which the great war has brought upon us might be cleared away within a single decade, and that, by new savings alone, and with no heavier taxation than we carried before the war.

BUSINESS RESEARCH AND STATISTICS

By J. George Fredericks. xi, 333 pp. D. Appleton & Co.

REVIEWED BY FREDERICK K. MELVIN*

Lawrence K. Frank in reviewing this book for *The Quarterly Publication of the American Statistical Association* asserted that it "makes no contribution to methods in business research, confining itself almost entirely to an enumeration of questions and problems to which business research should address itself, and to the discussion of their practical value."

With this critical decision from such an authoritative source most executives will agree.

The book has, according to Mr. Frank,

*Economist and Statistician.

several features "worthy of attention by professional statisticians." A similar remark is true of its perusal by business men.

As Mr. Fredericks sees it, there are two defects in the present situation in business research: first, the attitude of the average business executive, who has not yet fully grasped the profit and economy of making complete and constant use of research and statistics, even in minor matters of business; second, the attitude of the average research worker or statistician, which is often too narrow and circumscribed and uncreative.

The scope of this book is so wide, and the business angles described and analysed so many, that it is difficult to give in a brief review an adequate idea of its subject matter.

The following paragraphs from the chapter on "The Law of Averages" will show the author's method of applying general principles:

To illustrate the opportunity in business for profitably becoming better acquainted with the use of the average: There are two kinds of businesses using the law of averages to the tune of millions of dollars. The first is the insurance business, and the second the mail-order business. It would pay any business man to spend considerable time getting acquainted with the remarkable use of figures in either of these industries. The insurance companies have approached almost the uncanny in the use of statistics. It is often popularly believed that the insurance companies take a large element of risk in wagering many millions of dollars upon the chances of people to live to certain years of age; or the chances of accident, theft, fire, etc.

As a matter of fact the actuarial statistics, as they are called, upon which the insurance companies base their rates, their risks, and their capital, are almost an exact science. To the average person it is naturally a curious thing to say that risks in railroad accidents have been reduced to almost an exact science; or risks from theft or suicide or fire.

As a matter of fact, it is known to insurance companies as a hard-and-fast fact, proved by the law of averages, that out of one hundred average healthy men, twenty-five years of age, sixty-four will reach the age of sixty-five years. Eight out of every one hundred men will die by accident, and a similarly known number out of this one hundred will commit suicide, have their automobiles stolen, suffer a fire, etc. It might seem as if this were going far enough, but the experts in the use of the law of averages in the insurance business go considerably further. They know that out of every one hundred men, twenty-five years of age, one will be rich, four will be well to do, five will be earning their living, fifty-four will be dependent upon friends or charity, when they reach the age of sixty-five. They also know that a majority of those who have money at thirty-five years of age will have lost this money by the time they are sixty-five. The relative average chances of men and women in accidents are calculated because it is known that three times as many women as men die by accident; and five times as many men are killed on railroads as women. One might fill many pages with statis-

tics based on averages which the insurance companies have been wise to spend a great deal of money to accumulate—often working co-operatively at very heavy expense of tabulation.

But the use of averages is by no means confined to insurance companies. In the men's apparel field it is known that 23% of customers will wear hats of 6½ size, and 1% will have 6½ size; also that 33% will have 15 size collars.

In the hotel restaurant business it is known that 1% will order oysters, 5% will order fish, 7% will order soup and 20% will order salads.

The mail-order business has discovered the value of statistics chiefly because every move that it makes is controllable, and every response it gets is tabulatable. Numerical tests and statistical applications of the law of averages are not only possible to make, but quite imperative if a great deal of money is not to be spent with fatal blindness.

A mail-order house can control statistically all the letters or catalogs it sends out, and as a check on results its order blanks or price numbers indicate various details, through symbols, and as it can by electrical machinery quickly tabulate the characteristics of its orders resulting from its controlled sales efforts, the possibilities of the use of the average are unlimited. Averages from many angles, from the character or amount of the money received, whether it is money order, cash, check, etc., up to any individual characteristic of the buyer may be tabulated and studied while they are "hot from the griddle" and their lessons applied. Mail-order concerns large and small, which operate with modern technique in the use of the law of averages, never make any mailing of circulars, nor in fact take any step involving any expense or new developments, without first making accurate try-out tests on small quantities, and considering the results from the point of view of averages.

In fact, the executives of a mail-order business learn after a while to discuss the entire matter of development effort in the special lingo of the law of averages. They will talk of "operating on a 3% basis," or "approaching the 1½% dead line." Before sending out a great quantity of mail matter, an entire series of tests is made of a considerable variety and scope, upon certain groups, in certain territories, with certain enclosures and using certain appeals in order to determine the relative merits of each method, and thus establish the rate of expectation of returns if the larger volume of circulars be sent out.

A test mailing is made of a thousand names, usually thoroughly representative of the entire broad list; or selected to form groups, separate thousand name individual tests made in each group. If such preliminary tests show a percentage of results which is above the necessary per-

centage for making the larger mailing a practical proposition the profit possibilities of the circularization of the larger list are definitely calculable, as the average will vary very little if the test work is well done.

The law of averages properly applied will almost certainly match very closely the final result as made in the test, no matter how enormous the number of units. If the test does not result in a paying average, alteration in the methods may be adopted and a new test made. Or a readjustment of method based upon the story the various averages tell may be worked and a new test made.

As the number of customers of Sears, Roebuck & Co., for instance, number over 7,500,000, it will be seen that the great number of units avail-

able for the test afford remarkable scope and the results may be called pretty conclusive.

The chief fault of this book is that found in most literature about business: the emphasis is put on the "what" and the "where" rather than on the "why" and the "how." Those executives who "shape policies, make markets, or direct officers" are especially interested in the answer to the last two questions.

Such answers are hard to get and doubtless Mr. Fredericks has been as successful as could be reasonably expected. But the desire for information as to the reason and to the method remains unsatisfied.

RAILROAD SECURITIES—A COURSE OF STUDY WITH REFERENCES

By A. M. Sakolski, Economic Expert, Chase National Bank. 105 pp. Doubleday Page and Company, for Investment Bankers Association of America

REVIEWED BY B. P. ADAMS *

If I were a young man intending to make my way to the top in Wall Street by serious effort, and especially if I were making my start with a bond house or a brokerage firm specializing in railroad securities, I would persuade some experienced friend to answer a few questions. I would ask him what I ought to know about railroads in order to deal intelligently with their securities, and I would ask him how to secure this knowledge.

And my friend would probably reply: "You ought to know the basic facts about the character and functions of American railroad corporations, the character of transportation facilities, the financial side of railroad operation and the relation of capital investments to corporate resources and liabilities."

I would then ask him to outline in a little more detail the subjects I should study.

He would answer: "Find out why railroads are built and what rights they have under state and federal laws. Consider how and why they have developed into the

present systems. You ought to know all about the various kinds of bonds and preferred stocks. You should understand the precise nature of railroad mortgages and equipment trusts; you ought to be familiar with all the elements that enter into railroad construction cost and operating expense. You ought, for instance, to be able to see clearly how the decision of a railroad executive to build a curve around a mountain instead of tunneling through it might affect the value of the road's securities. You should be able to analyze railroad traffic; you should certainly be able to read and comprehend railroad financial statements; you ought to be able to tell whether a large 'Surplus' really indicates financial strength; you should study the complexities of railroad capitalization and valuation, of reorganizations and receiverships. Finally, you ought to know something about the marketing of railroad securities."

"Where," I ask, "can I get all this information?"

To which my mentor patiently replies: "Well, there are the railroad manuals like Poor's and Moody's and other standard

*Financial Editor of *The Literary Digest*, New York City.

works and there are the statistical reports of the Interstate Commerce Commission and the Bureau of Railroad Economics. A number of periodicals like *The Commercial and Financial Chronicle* and *The Railway Age* contain valuable up-to-date material; and, of course, there are innumerable railroad textbooks. A bibliography with about 40 titles of the most essential books is given by Dr. Sakolski in his brief outline

of a course of study in railroad securities. And, incidentally, I might say that he sets down in his book everything you really need to know about the subject and tells you just where to go for detailed information. Study it carefully, think over its contents, follow the suggested researches, and you will find yourself well on the road to a thorough understanding of railroad finance."

THE FRONTIER OF CONTROL

By Carter L. Goodrich. xvi, 277 pp. Harcourt, Brace, and Howe

REVIEWED BY ESKHOLME WADE*

After all we have read and heard about the democratic control of industry, it is disappointing or reassuring—according to our point of view—to learn that the demands of labor for a voice in the management of industry are as far removed from any desire to be burdened with the fundamental problems of management as they are remote from the chaos of Bolshevism and Soviet government in industry. This statement is not an expression of opinion; it is a deduction we draw from the facts compiled by Carter L. Goodrich from many sources and lucidly presented in his book in the way they can best speak for themselves.

To further his study of labor problems Mr. Goodrich went to England. In the birthplace of democracy and mechanical industry and of the latest combination of the two, he fraternized with workmen and foremen; he interviewed members of trade unions, employers' associations, Whitley Councils and Royal Commissions; he hobnobbed with the intellectuals of the British Labor party; and he put searching questions to employers, workers, and others in contact with the new movement for self-government in industry—so far as it has gone.

After searching through the length and breadth of the land for evidence of industrial democracy in practical operation, he

finds that the control simmers down to a demand here and there by a self-respecting body of workers to be allowed to manage certain matters of shop-routine and discipline for themselves. Of these demands perhaps the most revolutionary is for the election of foremen by workers themselves.

But even this privilege as yet is far from being generally conceded. To quote the author:

There is, then, some body of experience of trade union control over the choice of foremen in a number of the older crafts. Is there any trade union control over the choice of foremen in "the great industry" itself, in the modern large-scale, carefully-regimented industries where the strain of superintendence is the greatest? The answer can be almost a direct "no." I have been able to find no instance in which the workers in modernized industry have either the recognized right of election of foremen or the formal right of vetoing an unpopular selection. Instances even of consultation over the choice are extremely rare, even in cases where the works committees discuss a fairly wide range of subjects. Messrs. Hans Renold, Ltd., chain manufacturers with a large factory just outside Manchester, make a practice of announcing the choice of a foreman to the shop stewards' committee and explaining their reasons for it before publication of the announcement. Messrs. Rowntree & Sons, Ltd., at their cocoa works at York, allow this discussion to take place before the decision is actually reached and (presumably) allow it to influence the decision.

These very minor exceptions are perhaps chiefly of importance as showing how definite a

*Special Reviewer for *Administration*.

principle it is in the constitutional theory of modern industry—if there is any such thing—that the workers are excluded from any control over the choice of their supervisors.

The gist of Mr. Goodrich's investigation and the sum and substance of the demand for control is that miners, railway men, shipbuilders, textile workers, and other completely unionized bodies of men demand the right to be consulted about the allocation of work, the staffing of shops, their hours of employment, and such matters as apprenticeship, hiring, and firing; while in some industries where the nature of the work is dangerous or where its proper performance entails independent action and judgment, occasional demands are made for specific improvements in plant and management.

That such suggestions are often worth while is illustrated by the following:

In one interesting case, a committee of pattern-makers suggested, as an alternative to dilution, the purchase of certain tools and brought about a 50% increase of output. A recent instance is even more striking. The British Westinghouse Co. was considering closing down its foundry on account of the high cost of production. The works manager put the proposal before his shop stewards' committee. The committee objected and asked for two weeks in which to collect statistics of wages in other foundries in order to show that the high cost of production was not due to high wages. These figures were presented and indicated that the

wages in the foundry were, if anything, lower than in competing ones. The committee argued that this showed that the trouble was one of organization and asked for another two weeks in which to prepare suggestions. At the end of that time the committee presented a memorandum on foundry organization—which the works manager described as the ablest he had ever seen, and the firm has decided to keep the foundry going and to spend hundreds of pounds in carrying out the committee's suggestions.

To those in search of fundamental causes Mr. Goodrich's book furnishes further evidence, if more be needed, that "labor unrest" and "the insatiable demands of the working classes" have their roots just as much in incompetent and blundering management as in the perpetual wrangle over wages. The cry for production during the war threw a searchlight on such management and emboldened the workers to demand that the take-it-or-leave-it attitude of the arbitrary employer be replaced by discussion and debate in which their side of the case could be presented by a skilled advocate. The war gave the workers the opportunity to crawl from under the discipline imposed upon them by the threat of dismissal and the wielding of the big stick of hunger over the jobless man. Human nature being what it is, they seized the opportunity. But we gather from Mr. Goodrich's book that they are a long, long way as yet from any form of co-operative management and control.

EFFECTIVE HOUSE ORGANS

*By Robert E. Ramsay. xii, 361
pp. D. Appleton and Company*

REVIEWED BY HUGH E. AGNEW*

If that sweet young Miss who sat at the information desk had read the above book, she would not have told the messenger who was sent for a copy of the firm's house organ that he *must* be in the wrong place for they had nothing to do with musical instruments, they made packing cases.

* Member of the Editorial Staff of *Printers' Ink*, New York City.

Also those inspired executives who have a feeling that their firm is so exceptional and their product so matchless that they must turn publishers in order to let the world know of their achievements might be able to charge up the cost of printing their organs to investment, rather than merely to expenses, if they would carefully peruse the same volume.

How to make a house organ fit in with the general policies of the firm; outlining a very definite mission; choosing a name, size, frequency of issue, style, including the use of humor; and arrangement of cover, are all very fully discussed. Illustrations are also given from many of the most prominent house organs. The sources of material are given, as the editor, his co-workers both voluntary and those solicited for contributions, free lance writers, exchanges, syndicated features, general clippings, and responses that will be stirred up from the readers. Also the sources of names to whom house organs may be properly distributed are enumerated.

Several chapters in the second part of the book are taken up each with the way some special industry has used house organs successfully—always "successfully."

The one thing Mr. Ramsay has failed to discuss is the high mortality of this class of publications. Of the fact that there are more dead than living house organs he said

nothing. Perhaps he thought that the ample treatment prescribed for keeping them healthy and growing would of itself solve the ravages of "suspended publication."

The book has what every business book should have—an index. It is not very complete, unfortunately, but is helpful. The assertion just made is also true of the bibliography.

The very large number of quotations used makes the style choppy and at times difficult to read. Then there is a considerable amount of unnecessary repetition. For instance, the fact that *Poor Richard's Almanac* was a house organ for Ben Franklin's printing business is sufficiently striking so that it would be remembered with one telling.

But, the author was not attempting a high literary standard. Rather he was attempting to give a large amount of usable information upon a live subject heretofore inadequately presented. Most readers will say that he was successful.

PATENT LAW

By John Barker Waite, Professor of Law in The University of Michigan Law School. 316 pp. Princeton University Press

REVIEWED BY A MEMBER OF THE NEW YORK BAR

This work is readable and gives enough actual cases involving well known inventions to make plain what the author desires to teach. The difficulty about patent law is that each invention to a certain degree stands by itself, and it is not always possible for the expert, much less an inventor or ordinary layman to tell how the courts are going to apply general principles in any particular case.

Professor Waite brings this out very well and shows how many points there are on which courts have differed in their decisions. He explains the reason for the conflict in decisions of various courts as follows:—

A judge who can not drive a nail, to whom a mechanical toy is an inexplicable mystery, and chemistry incomprehensible, will naturally tend to find invention in that which a more technically trained judge would recognize as mere

mechanical skill. The reports show that certain judges have more often decided in favor of the presence of invention than against it, while others have the more often decided adversely to invention. One judge by whom many decisions have been rendered is well known among his friends to be lacking in any mechanical ability, and to hit the nail on the thumb more often than on the head. To one who has read many of his decisions it is apparent that he tends to find invention in anything mechanically ingenious, and to be loath to see infringement where there is great material change. On the other hand, another judge whose opinions indicate a highly technical education, is obviously conservative about dignifying a production with the name of invention and very ready in holding an invention to have been infringed.

The book will be a desirable addition to the library of every business man who has to do with patents.

REVIEWS OF BUSINESS PAMPHLETS

Safety in the Machine Shop. The Travelers Insurance Company. Hartford, Connecticut.

Every employment manager, every welfare department in our factories, every legislature seeking to conserve the lives of workers—indeed, every humane citizen who loves his fellows and knows that human life is *not* cheap, will be proud that a work of such value and authority as this volume on making the shop safe for the workers is nowadays regarded as a recognized part of the service of a great insurance company.

The dangers treated are those found in machine shops. The aim of the pamphlet is thus stated:

We have endeavored to call attention to the chief sources of danger, and to give general counsel with regard to the elimination or control of these sources.

The basic need is given frankly:

A manufacturing industry that is owned and operated by a corporation is likely to develop one-sidedly (unless special effort is made to counteract such a tendency) with too large a proportion of its efforts devoted to the development of mere efficiency, and too small a proportion to the care and protection of the workers. The man on the job is not a machine and it is a serious mistake to treat him as one. . . . A competent man in good working condition is a valuable asset, and it is a plain matter of sound business policy (apart from all humanitarian considerations) to provide for his safety and welfare.

The first section shows how the modern development of industry makes for risks. This point is worth noting:

A man having even a small mechanical bent can often be trained in two or three days to attend an automatic machine well enough to turn out a very good product; but a man of this sort cannot be expected to know enough about machinery to properly appreciate the hazards to which he is exposed.

Remaining sections deal with specific problems; such as, use of cranes; spacing of machines; shafting and belting; safety for lathes; individual motor-drive; forging and hammering; press-working of metals; grinding and buffing; illumination; automatic machines.

The section on infection from cutting

oils shows how modern and how complete is this study in preventive safety. Some of the points discussed are: soluble oils; infection and its causes; waterproof dressings; sterilization of oils by heat; use of antiseptics in oils; and so on.

One of the best sections is on the employment of women. It takes up certain theoretical and psychological considerations that need study, and does not slight the human factor that makes a woman employee object to wearing an unbecoming cap. Even the relation between safety and high heels comes in.

The value and interest of the pamphlet are immeasurably increased by the clear and well-taken photographs of shops and machines—both the right and the wrong kinds for safety. These are an inspiration even if one does not read the text.

Wills—Valuable Information for Everyone Who Has Property to Leave. Columbia Trust Company, 60 Broadway, New York City.

This booklet is a catechism on wills—how to make them, execute them, enforce them, and actually carry out the purpose of the testator. It is in the form of question and answers grouped under certain main headings.

The trust company is asked many questions concerning wills so it has printed this little dictionary on wills, declaring:

In the following pages many commonly asked questions are authoritatively answered by skilled lawyers, with especial reference to the laws of New York.

Transportation Act of 1920. Guaranty Trust Company of New York, New York City.

This text contains a general summary and the text of the Transportation Act of February 28, 1920, fully indexed, together with a brief review of prior laws pertaining to federal regulation.

A chronological synopsis of the laws since 1887 when the Interstate Commerce Commission was formed is given six pages.

A handy summary of the present act is followed by the text of the act itself.

Foreign Exchange To-day. National Shawmut Bank. 40 Water Street, Boston, Mass.

The contents of this brochure are outlined as follows:

Vital Importance of Foreign Exchange—General Principles—Gold Pars and Shipping Points—Present Exchange with Europe Characterized by the Disappearance of the Lower Shipping Point—Illustrated by Course of French Exchange—Excess of Imports and Depreciated Currency—Grave Position of French Government Finances—Possible Recovery of the Franc—Remarks on Other Exchanges.

Credit Control. Textbook on Charge Authorization. The Lamson Company. Boston, Mass.

The term "textbook" exaggerates this neat little booklet. It does contain some wise maxims for the retail credit manager. Perhaps its best sermon is on the value of the saleslip:

The charge sale in the retail store is a deferred payment cash sale. The evidence of this sale is the charge voucher, or saleslip, and since it is *evidence*, it should be treated the same as money. . . . The charge ticket is the basis for all *records*, the basis of *billing* and the basis of *auditing*. For this reason charge vouchers should be handled as carefully as money.

The dangers of the authorization of credits by word of mouth are thus described:

When credit is authorized by oral communication, mistakes and misunderstandings will occur because names, numbers and letters are not easily understood over the wire. Then the responsibility is divided between the sales clerk and the credit authorizer. The charge vouchers are scattered all over the store to be collected periodically. . . . All charge transactions should be authorized from the unmistakable written sales voucher and the credit manager should be given full control of all credit authorization. No one not under his control should be permitted to authorize.

Of course this is the partizan brief of one interested in the conveyor versus telephone system, but it has value as, at least, the clear statement of one side.

Foremen's Manual. Scovill Manufacturing Company. Waterbury, Conn.

The foreman is the beginning of administration in industry. He is the cog through which management meshes with labor, and

through this essential cog all the plans and hopes of the highest executives get real power.

Part of the breakdown of industry in Russia is declared to be due to a lack of this especial type of foreman executive. To develop it and cherish it has become one of the aims of scientific American industrial managers.

That the foreman has a real job is proven by this little manual dedicated to him by the Scovill Company. Its purpose is thus stated:

The manual is commended to the careful attention of those in authority, so that they may be familiar with the various forms of procedure related to their respective duties.

This dedication has in it something of the justice of the law and the esprit de corps of an army—even of the church, in that powerful phrase "those in authority." Its contents show what the literary might call "the high seriousness" of the foreman's place.

Part I deals with general rules, especially those on the employment and handling of labor, telling the foreman how to hire and introduce his labor to the work under hand. It outlines his duties in making out forms, handling time, arranging for transfers, payment of wages, and discontinuance of services. The rules, of course, will vary with the technique and forms of the industry. One section dwells at length upon the employment of minors, and is supplemented by an Appendix with verbatim quotations of the laws on child labor, hours for women and children, and seats for women—direct from the Connecticut statutes. Here also are regulations on bells, holidays, absences, passes, time-keeping, and pay. The chapter ends with instructions on accounting and supply.

Part II gives the rules for safety, such as the handling of accidents and problems of workmen's compensation. Sample rules are:

If a serious accident occurs in any part of the plant, the foreman should leave every bit of evidence in connection with it undisturbed to assist the Investigation Committee.

Safety devices should not be taken off or tampered with. If they are not working properly, the foreman should be immediately notified. It is the duty of foremen to give their

men reasonable instructions regarding the hazardous nature of any work . . . whenever the foremen know or have good reason to think that the work is dangerous or the men unskilled . . . to give adequate warning of danger whenever the foremen have good reasons to know that the men are unfamiliar with the dangers. . . .

There could be no better example of how a good foreman can protect both his fellow-workers and his company. Similar are his duties in preventing fire, overseeing fire-drills, and the protection of fire apparatus.

Executives who are worried by the problem of caring for costly machinery will understand the value of Part III on handling equipment. It gives rules for using compressed air; for clean containers that work may not be injured; for keeping elevator service efficient; for protecting concrete against animal oils; for keeping an eye on delicate scales; and for overseeing electrical equipment and urging economy in the use of current.

A foreman who is careful of his men and his tools, without becoming what workers call disrespectfully a "sis," is the aim of these directions.

Part IV—a miscellany—indicates the possible human relations and initiative in the foreman. For example:

Occasion may arise when, in the judgment of a foreman, it would be advisable for an investigation to be made of some phase of manufacturing with a view to improving an existing process or developing a new one. In such cases the foreman is invited to write to the Chairman of the Research Committee, outlining the matter he has in mind.

There is a Scovill Foremen's Association for social and educational purposes. There are also directions as to how foremen may help their men through the service department, with classes in the educational division, the use of the library, the help of the Y. M. C. A., and by interesting them in the factory bulletin which is published once a month.

These varied demands show why a foreman's manual is needed. They also explain why this one is printed with dignity and bound in lasting red cloth—it is lubricant for perhaps the most essential of all cogs—the foreman executive.

Comparison of the Workmen's Compensation Laws of the United States and Canada to January 1, 1920. By Carl Hookstadt. United States Bureau of Labor Statistics, Washington, D. C.

This bulletin is a revision of a similar study (Bulletin 240) in 1917. The present study covers laws up to January 1, 1920, and includes for the first time a digest of the Canadian compensation laws, and a comparison of their chief features with the American laws. The importance of the revision as well as of the subject is shown by the fact that thirty-four states have changed their compensation laws, and five enacted such laws since 1917, making at present a list of forty-two states, Alaska and Hawaii, Porto Rico, and the federal government, that have such laws.

Probably the most important section deals with tendencies in legislation. There is not space to exemplify these in detail but note the general ideas. Considerable dissatisfaction has been felt on the elective feature of compensation laws, and in such states as have elective features a large proportion of employers refuse to accept them. And in spite of recommendations, Illinois alone changed from elective to compulsory laws. The scope of the various acts has remained quite stationary. Twenty states reduced the waiting period; one increased it. In practically all of the states compensation payments are based on the wages of the injured employee, ranging from 50 to 66½ per cent. Fourteen states have materially increased their original percentages. The provisions as to medical service have undergone greater changes than any other feature. Thirty-two states have increased the medical service originally provided.

State legislatures and compensation commissions seem at last to realize the fact that adequate medical and hospital attendance is absolutely essential for the complete economic rehabilitation of injured workmen. There is also a tendency toward closer State supervision over the quality of medical service furnished by employers . . . and a trend toward allowing the injured employee to select his own physician.

Wide variations in sectional progress are noted:

One is the absence of these laws in most of the southern states; another is the refusal of most States to be guided by the experience of other States; and the third is the inclination of the Western States to strike out along new lines. . . . They are the only States to establish exclusive State insurance systems . . . and alone have established pension systems.

The bulletin contains very valuable inserted charts showing the main features of the existing laws in all the places discussed, including a new one for the Canadian provinces. Several new features have been added to the preceding study: sections on occupational diseases; remarriage of widows; second injuries; rehabilitation; adequacy of the partial disability schedules; relative severity of upper and lower limb injuries; contract doctors and hospitals; and hospital and medical fees. With long sections on the scope of the laws; injuries covered; compensation benefits; medical and surgical service; and many minor facts; and with tables of many kinds and chart maps, this offers the executive an authoritative manual of what is being done in respect of workmen's compensation.

Handbook of the Canadian Pulp and Paper Industry. The Canadian Pulp and Paper Association. Montreal, Canada.

Americans who live in a paper age and who suffer from a paper shortage must be interested in this beautiful book full of facts on Canada's second industry outside of agriculture. It is a directory of facts on Canada paper and the firms engaged in its manufacture. Any manufacturer who uses paper or pulp products will enjoy reading this resumé of what Canada—our chief dependence for this material in the not distant future—does and expects to do.

The data is reasonably authoritative, though allowance must be made naturally for the interest of those who print the pamphlet. The Dominion Bureau of Statistics of the Department of Trade and Commerce, and the Departments of Lands and Forests of Quebec, Ontario, and New Brunswick have helped compile the material. Naturally it is well printed, with a page rule in color, on a super-paper that is itself a proof of the pudding.

Photographs of paper plants and machinery give striking proof of the size and

efficiency of the Canadian paper industry.

Paper-making in Canada gives a charming history of the development of the giant, and closes with this note of hope:

Canada is today one of the greatest paper-producing countries in the world . . . probably destined in time to be the greatest. Its supremacy rests upon the possession of extensive forest resources and abundant water-powers. . . . It takes practically 100 horse-power to make a ton of paper.

While Canada may not have inexhaustible supplies of pulp wood, there is no doubt that with proper methods of conservation and reforestation, the store will not only meet all present reasonable requirements but may be preserved as a heritage to those who come after us.

Chapter VI on Canada's Pulpwood Resources gives the uncut cordage as 901,000,000 cords, and points out some of the methods used to conserve the supply. It also includes a note on the American supply.

Chapter VII gives a dazzling picture of Canada's water-power, totaling nearly 22,000,000 horse-power, of which 19,554,000 are still unused. The tables in those and other chapters are of great interest.

Chapter II is an exhaustive statistical analysis of the paper industry by the Dominion Bureau of Statistics. Its nature is shown by the title "A Census of the Pulp and Paper Industry," showing in addition to production, the use of raw materials, fuel consumption, capital investment, mill capacity, power employed, employees, and wages.

Two sections of the book are given to the manufacturers. Chapter III deals with the securities, resources, and history of the leading companies, taken alphabetically, while Chapter IX lists all the mills in Canada, giving location of executive offices, mills, officers, production, and other commercial data. This section should prove of practical service to those who want a directory of paper-makers in Canada.

Other chapters of interest are those on export and imports of the industry in Canada, with tables showing amount and kinds; and a special description with illustrations of the process of paper manufacture. As a primer of facts for those who may have to do with Canadian paper, this booklet of 116 pages is worth having handy.

CHRONICLE AND COMMENT

COST ACCOUNTANTS' CONVENTION

The National Association of Cost Accountants is making arrangements for one thousand cost men at the Annual Convention to be held in Cleveland on September 14, 15, and 16.

Headquarters of the Convention will be in the Hotel Cleveland. Among other features there will be an exhibit of mechanical devices which are adaptable to cost purposes.

This exhibit is under the supervision of W. R. McLees who may be addressed at the National Headquarters of the Association, 233 Broadway, New York City.

SQUARE-MEAL LUNCH

For \$2.50 a week the men, and for \$1.75 a week the women, employed by the Westinghouse Electric and Manufacturing Company at Philadelphia, can buy a square-meal lunch in the company's cafeteria. *The Westinghouse Machine News*, the employees' magazine, prints a typical menu for any one day:

Roast beef, green peas, sweet potatoes, brown; pepper hash, rice pudding, coffee, iced tea or milk, served in liberal portions.

Fresh linen and napery on the tables are maintained at all times at little cost. At 12.42 P. M. four tables are reserved for the women employed in the offices of the plant. The rest of the tables are occupied by the men and women from the other sections of the plant.

The cafeteria move in the Westinghouse Electric and Manufacturing Company grew from the need for hot food for the employees. The lunch brought by the employees in packages was found to be inadequate. The second step was serving hot drinks and "hot dogs."

The next development was the installation of a modern kitchen, a cafeteria where self-service is found and the opening of a dining-room where meals are served at a slightly greater cost.

CLEANLINESS IS NEXT TO—

"The wages of sin is publicity," says a professor of journalism. Uncleanliness, in the opinion of the Mead Pulp and Paper Company, is a sin and the wages thereof may be bound in a statistical report published in *The Mead Co-operation*, the plant's house organ.

Every department in the plant is listed with the estimate of cleanliness for three successive weeks. In this way the rise in the cleanliness figures can be compared with the preceding figures at a glance.

There is 97% cleanliness for the third week of the campaign in the sheet finishing department compared to 96% for the previous weeks. In the roll finishing department the percentage rose from 95 to 98. Storehouse No. 4 and 5 was 97% for the first week and then dropped to 95% in the second, but rose again to 98% in the third.

The rag washer department was only 10% cleanliness in the first week of the campaign, rising to 70% cleanliness in the third week. The research department rose from 35% to 75% after three weeks of the cleanliness campaign.

The paint-shop began at 90% cleanliness and at the end of three weeks was only 88%. The basement room in the plant, however, re-established faith in the campaign, having risen from 65% cleanliness to 85%.

The cleanliness record is published monthly.

PRINT SHOP FOR PLANT

Unique in a ship repair yard is the printing-shop of the Morse Dry Dock Company. *The Morse Dry Dock Dial*, the magazine of the plant, is printed in this shop.

The print shop was originally established to manufacture the various stationery forms and pieces of advertising literature necessary in conducting the business of the Morse Dry Dock and Repair Company.

In the current number of *The Dial*, the superintendent of the printing-shop comments on the growth of the printing plant as follows:

At the present time this compact little unit of the company is not only handling satisfactorily the printing of the company and the Employees' Association, but also the work of some of our friends and neighbors who have come to be helped out when their own printer has been unable to meet their requirements. Needless to say these friends from the outside who at first came to us of necessity have favored us with repeated orders and our Print Shop to date knows no dissatisfied patron.

In the printing department of the Morse Dry Dock and Repair Company over 1,200 orders have been taken care of during 1920; over 2,600,000 impressions printed on three presses, requiring about 1,500 reams of paper ranging in size from 17 x 22 inches to 38 x 50 inches. Over half a million envelopes of various sizes have also been handled.

Service is thus the watchword of the little shop:

If a shipowner wants photographs or printing he is as much entitled to make use of the photographic or printing departments tho those departments were installed for the company's own use, as he is entitled to pipe covering, sheet metal work, plumbing or any other work the company is equipped to handle.

PLANT EDUCATION

With an enrolment of 115 students, a class in practical steam engineering has been organized among the employees of the Standard Oil Company at Whiting, Indiana.

The Stanolind Record, published for the employees by the Standard Oil Company, commenting on the engineering class, said in part:

The study outline is unique in that it is so arranged that shift men may miss one class out of three and still carry on their studies without getting behind the other students.

The aim of the study course is to enable students to pass examinations for engineers' licenses. From every part of the plant men have come to take the course.

The organizer and director of the class, P. O. Vandever, has had long practical experience in steam and efficiency engineering. His experience coupled with a broad technical knowledge has enabled him to outline a course which meets the needs of employees engaged in a wide variety of work.

SUGGESTION SYSTEM

Another concern to pay royalties on suggestions is the Yawman and Erbe Manufacturing Company. In *The Y. and E. News*, the organ of the plant, is published, at regular intervals, a list of the prize-winners and a brief comment on the suggestion each has offered to improve the efficiency and general character of the firm.

Turn your ideas into cash. Improvements on machinery, reduction of costs, betterment of factory and office conditions—these are the subjects on which your suggestions are needed. How many times have you thought that such and such an idea would help you with your work? Write it down and send it to the suggestion board, where it will be considered and given a trial, and if practical will not only bring you a cash prize, but will stand as a good mark for you in the eyes of your Department head, incidentally helping you towards promotion at a future date.

At the meeting of the Board of Awards, held at regular intervals, the suggestions are arranged according to merit.

WRITING UP EXECUTIVES

Every executive has been solicited for the permission to "write him up." Charles E. Carpenter, President of the E. F. Houghton & Company, of Philadelphia is no exception to the rule but he is possibly the first to speak so frankly about his experiences, which he prints in his own periodical, *The Houghton Line*:

There have been a lot of "write-ups" of me that, like the wet firecracker, didn't go off. Chaps have come around and said that they intended, with my permission, to print a sketch of me in such-and-such a periodical, and I've told 'em to go ahead and do so, if they wanted to, so long as they didn't make it an obituary notice, for I don't like to read about myself in the past tense.

When it came near publication date, however, they have gently intimated to me that it was customary for "the hero" to come across with a more or less substantial sum. As I always balked at this "heroic custom," because I never did believe in fooling the public, the write-up usually never appeared.

Therefore, when the editor of *The American Magazine* wrote to me that he was making me the subject of one of those biographical sketches

for which his magazine is so famous, I rather shied at first. I told him, ultimately, however, that I didn't mind, as I was a public character, apparently, and had had to put up with a great deal worse than that. I sort of expected, though, that it was going to be another case of my looking over the proofs of a flowery tribute, being informed of the alleged custom among "heroes" and of never seeing even my name in the magazine.

They fooled me, however, for they merely sent Mr. Frank B. Copley to Philadelphia to check up, by an interview with me, on some facts about me they already had—and, in due course, the sketch appeared.

Before Friend Copley came I had made up my mind as to just what I was going to tell him. I was going to try to change what seems to be a somewhat general impression; viz., that I am a scrappy kind of guy, whose method of expressing personality and vim and vigor is to knock someone cold every hour. I was going to tell Copley how I went to Sunday-School regularly when a boy, how I always accompanied my good old Dad when Dad went out to preach at institutions and elsewhere, how I used to pass the collection plate and, altogether, that I was more of a sanctimonious citizen than otherwise.

But Copley had either been posted as to the real facts, or thought the Sunday-School stuff would not interest their readers. Somebody had evidently told Copley more about my ring experience than about my Sunday-School experience and that I had never lost the habit of hitting out straight from the shoulder. He had therefore probably selected the title, "A Man with a Punch," before he left home and had predetermined to write the story of my life to fit his title.

Anyway, he passed up the Sunday-School stuff when we got to talking, and the first thing I knew he had me bragging about myself. When you carry a fellow back to his boyhood days he is apt to put on the loud pedal a little bit as to his exploits. When you have reached a certain age, you somehow cannot refrain from trying to impress upon your hearers that you were once really in the game.

Be that as it may, Copley apparently got the facts he wanted about me, and went away satisfied—and I didn't hear anything more until they sprung the November issue of *The American*, with my "biog" therein.

And since then the trouble's been on.

I believe *The American Magazine* claims a million-and-a-quarter circulation, and it would appear to me that they are, unlike publishers as a rule, telling the truth about it. The circulation of *The American* must not only be a million-

and-a-quarter but each copy of the November issue must have been read by at least four people and each reader must have told ten others about the sketch of me. Anyway, all of that aggregation seems to have written to me about it.

I always had the idea *The Houghton Line* was some little correspondence creator, but, when compared with *The American Magazine* in that respect, *The Line* is like unto a torn deuce in a dirty deck of cards.

I have a system by which my *Line* correspondence is handled by my secretarial force, but the deluge of letters that followed the appearance of the November *American* on the newsstands did to my secretarial system what "the Branch," after a Spring freshet, does to the bridge over which the Jerkwater Railroad passes.

A lot of folks have been asking me since then whether I paid for the article. I told you above that I always balked when it was suggested to me that it was customary for the hero to come across. No such suggestion was made to me, and I didn't pay a cent. On the contrary, they paid me, for in my mail one morning not long after Copley's visit I found a check for one hundred plunks, to pay me for the "story," as they called it.

Getting this check almost convinced me, for the time being, that I was a bigger fool than those I had all along been calling fools for believing they could get something for nothing. I ought to have known, however, that, when I was getting something for a hundred bucks less than nothing, I was more than ever sure of getting stung.

Did I pay for it?

Not in cash,—but listen to the consequences of that article and then decide the above question:

I have been elected to so many societies and associations that my annual expenditure on dues alone would break Rockefeller, if I had accepted election.

I have been asked to make addresses at so many distant points that it would require the capital of the National City Bank to pay my expenses.

I have been asked to buy braces and rolling chairs for cripples; to send in my subscriptions to magazines through a dozen or more invalid agencies; to aid the aged and decrepit relatives of chaps who are alleged to have been my school-mates and chums.

One guy wrote me that he had never been well since I cracked him in the jaw. This made me feel so good that I did not turn him down.

At least a dozen men of prominence and wealth wrote me that they would subscribe any reasonable amount of money to my business if I would

take their sons and make something out of them. Just as if it was not hard enough to make money the way I do. It is a wonder to me, however, that some of the stock-jobbers have never worked this "rich-man's-son" scheme.

Women have deluged me with letters.

Since the women have voted, they have availed themselves of all the other privileges men enjoy, including writing to me, telephoning to me and calling on me.

I received three proposals from widows, each of them worded in such complicated phraseology that I am not yet certain whether the proposals are financial or matrimonial. None of the trio seems to be aware that I am a married man, with half-grown grand-kiddies.

Another woman, claiming to be young, innocent and all that sort of thing, pestered me for an interview. When I refused she wrote me; "If you refused me an interview because you thought the risk was too great, you flatter yourself." I wonder what she meant.

There were a score of writers who wanted to know if they could buy stock in E. F. Houghton & Company.

Then there were a few invitations to christenings. At least, my "presents" were requested because the child was to be named "Charles E."

A number wanted to know if my yacht was for sale. I don't know what made them think I was broke.

Quite common was the suggestion that, having made a success in this world, I ought to prepare for the next. If all of those who wrote and said they were going to pray for me make good thereon the little detail of my hereafter is all arranged.

The star-spangled-banner of them all was from a chap who said that my photograph looked so much like him that he wondered if I could, by any chance, be his father?

So you should not wonder that I say I'm going to run like 'll if ever a chap with intentions of doing to me what Copley did comes in sight.

I appreciate what Sir Philip Sidney meant when he wrote, "High honor is only gotten and borne by pain and danger."

Verily I say unto you; "Never again."

TRADE ACCEPTANCE

J. T. Holdsworth, Vice-President of the Bank of Pittsburgh, has compiled the following ten "don'ts" to supplement his leaflet on "The A B C of the Trade Acceptance."

Don't confuse a trade acceptance with a promissory note. The former is a bill of exchange and is given in settlement of

a current business transaction—an actual purchase and sale of merchandise; the promissory note may represent any one of a number of considerations—past due accounts, speculative ventures, permanent capital transactions, etc.

Don't try to use the trade acceptance to renew or extend a maturing trade acceptance or an open account. The self-liquidating quality of the trade acceptance must be maintained.

Don't add a single unnecessary clause or word to the instrument, thus possibly destroying its negotiability.

Don't be deceived by assuming that the mere tender of a trade acceptance turns a poor or doubtful credit into sound credit. If the buyer's credit is not good enough to sell him an open account don't sell him against acceptances. Though the acceptance method tends to turn chronically slow accounts into prompt settlements, preserve the good name of the trade acceptance by using it only with customers of sound credit.

Don't use the trade acceptance as a means of prolonging or extending the terms of the credit or obligation.

Don't use the trade acceptance primarily as a collection instrument; it merely takes the place of the old wasteful open account and makes explicit the agreement (implicit in the open book account) to pay for certain merchandise on a definite date.

Don't try to introduce the trade acceptance to customers without explanation and education as to its proper use. Even yet many merchants—and bankers, too—do not understand the trade acceptance.

Don't offer or request undue inducements in the form of extra time, discounts, etc., in connection with the trade acceptance. If fully understood it will win its way without bonus, premium, or other inducement.

Don't take trade acceptances if one can get cash payment—unless the latter costs too much in the way of excessive cash discounts.

Don't allow any abuses or misuses to creep into trade acceptance practice which would weaken its good name or its increasing usefulness in business.

COST ESTIMATING SYSTEM

Editor of *Administration*:

It is with considerable pleasure that I read the article "My Little Black Book" by Jason Rogers in the February issue of *Administration*.

Men who have to stand or fall by the results of a cost system are generally too busy to appear in print. But to us who live in houses rather than build them, the story of the other cliff dweller is very interesting, for his troubles are our troubles and his joys our joys.

"My Little Black Book" raises the question whether the same result could not more frequently be attained by a simple homespun affair instead of the elaborate tailor-made affair so often used. When from our objective we look backwards over the weary way the shorter paths confront us. Have cost systems reached the more direct paths?

Costs can be established by either finding out what the result was for a given unit, or by calculating what they should have been, and then comparing this to the result achieved. A comparison of these two methods presents many interesting points.

COST-FINDING SYSTEM

Records details and builds up total result from elements.

Speed essential.

Complexity of operation.

Error distorting elements not easily detected.

Develops small knowledge of elements.

Main purpose to give actual costs.

Field highly developed by experts.

COST-ESTIMATING SYSTEM

Calculates correct elements and compares result by dissection.

Speed less essential.

Simplicity of operation.

Error distorting elements easily detected.

Develops great knowledge of elements.

Main purpose to give actual costs in terms of expected results.

Field left fallow by experts.

The first method reminds one of a description of a pre-historic geological monster reconstructed from a few bones. It would

be a whole lot easier to believe if they had a live one and took it apart. As most manufacturing companies sell on a basis of estimated costs, should not this phase of cost accounting receive more attention?

Very truly yours,

(Signed) GEORGE A. PROEHAZKA, JR.

Central Dyestuff and Chemical Co.,

Newark, N. J.

EDUCATIONAL EXPERIMENT

It is in the nature of man to want to be his own boss and to run his own business. In these days of large-scale production and chain-store distribution, the opportunities for men to strike out on their own are growing less and less. More and more men are content to work under orders. The summit of ambition of most youths who start in business as office boys or who enter industry as technically trained men is to rise to an executive position of power and responsibility in which, though they give orders to others they are still compelled to take orders and to do as they are told.

It is the belief of Arthur E. Morgan, a civil engineer, that many able men remain in positions where they must do as they are told because they have never been properly trained in the art of directing the energies and activities of others. As Mr. Morgan is the man entrusted with the spending of \$35,000,000 for the purpose of preserving the towns of southwestern Ohio from their periodical inundations, we may take it that he knows something about executive training. The deficiency of the rising generation of executives in the spirit of independent action, Mr. Morgan believes to be due to our educational methods. During a dozen or more years of the growing period of the modern youth he is taught in school and college to do what he is told with little or no opportunity to reveal initiative and to shoulder responsibility. The appointment of Arthur E. Morgan to the board of trustees of Antioch College, a little institution in Ohio which after a prosperous career fell upon evil days, affords him the opportunity of putting into practice his own theories about education.

The college is to be enlarged to accommodate 500 selected students and the new

system of education is to be inaugurated in the fall of 1921. Meanwhile plans are going ahead for the construction of a new type of college building. Instead of surrounding the campus with edifices that are a cross between a medieval chapel and a modern museum, Mr. Morgan intends to build a number of small factories, equipped with all that a plant employing from ten to fifty men requires in the way of equipment and power. In the part of Ohio where Antioch College is located small factories are numerous. A number of manufacturers have been found who are willing to move their machinery into these modern buildings and to draw upon the graduates of the college for their labor supply. Instead of students working their way through college by shining shoes, or waiting at table, or selling newspapers, or in any other blind alley occupation, they will be put to practical tasks where they can earn while they learn. The practical side of their study is to take up half the day and will include everything for which a student shows any aptitude beginning as a lathe hand or machine tender or office clerk and working up to the position of factory superintendent, cost accountant, assistant purchasing agent, or salesmanager. Business men only will occupy the professorial chairs.

Given competent instruction the time required to acquire skill in any trade or handicraft is generally believed to be much greater than it actually is. Most trades jealously guard their secrets by compelling the novitiate to undergo a lengthy period of probation before he is advanced to the position of a full-fledged journeyman. In many offices promotion depends upon the man above vacating his job so that the average office man may take ten years to acquire information and experience that under intensified methods of instruction, he might acquire in as many months. In an industrial college where vacancies in the higher executive positions will become vacant at the end of every term, and where students will change jobs as soon as they have proved their ability to hold them down, the possibilities of promotion will be limited only by the ability of the man next in line to make good.

The manufacturers whose businesses are

located at the college should more than recoup a small loss in spoiled work by the interest and enthusiasm of the workers and by their freedom from labor troubles. Strikes are not expected. Soldiering on the job will be unknown. And each of the businesses will enjoy the services of an expert cost accountant, sales manager, and purchasing agent at a fraction of the cost of the salaries of these specialists when their whole time is devoted to a single business.

SUGGESTION SCHEME

The Protectograph Factory News, published by Todd Protectograph Co. announces that since 1917, the year the "suggestion system" was inaugurated at The Todd Protectograph Co., one of their women employees has had fifteen suggestions accepted. As soon as the system was announced the young lady sent in a batch of suggestions for which she received cash awards and a number of Certificates of Merits.

Last November this employee turned in a suggestion that led to the development of an improvement in the Protectograph Check Writer. She was awarded \$100 for this suggestion. The various prizes she has received have totalled an amount larger than has been received by any other employee in the plant.

"It encourages the management to continue the plan," says *The News*, "for it will, we believe, spur other Protectographers on to do good work by suggesting improvements to either our product or our production methods."

CASH FOR COURTESY

"Courtesy" is the watchword of the R. H. Macy & Co. Each week a \$10 prize is given to that employee of the Macy Store who best displays courtesy in any relation to customers or each other. Judges walk about incognito daily and at the end of the week make the award.

Sparks, the official organ of the store, says, "The Courtesy Prize can be won by anyone of us dealing with Macy's customers and selling Macy good will—be we sales-

clerks, soda dispensers, waitresses, drivers and helpers, section managers, elevator operators—we all have an equal chance.”

The Macy Store gives monthly suggestion prizes also. Prizes are given to the originators of the best suggestions for the month.

CONTROL RECORDS

The Fuller Brush Company of Hartford, Connecticut, has recently taken an inventory of its development during the past seven years. From an organization with a capital of \$50,000 composed of \$20,000 in tangible assets and \$30,000 in good-will, it has grown until today its net assets amount to nearly half a million dollars and its sales two and a half million.

The development of business, which at times has amounted to double the business of the previous year, has necessitated a rapid expansion of the control records of the business. What this has meant is indicated by the fact that there was required a service of only five individuals to carry on the work of the executive and general offices seven years ago, whereas today eighty-five persons are employed for that purpose.

The company has during that time passed beyond the stage where one or two individuals knew personally all of the details of the business and came into contact with them to its present organization where the individuals on whom rests the determination of business policies must be informed by means of reports and charts of the many detailed operations of the business.

That it has realized the inability of continuing its former methods in its present highly developed state, shows that it has a full appreciation of the problems of modern organization from the standpoint of effective control.

A recent statement by Vice-President and General Manager, G. L. Marsh, contains the following summary of the plans of the Company for controlling its activities and operations:

When the volume of detail work is as large as ours, it would be impossible for any one individual to supervise or manage all of the work.

Therefore, several operations have to be grouped together and placed in charge of a division or department manager. Then certain divisions have to be subdivided into departments.

The work of a systematizer or accountant is to design records for each division and sub-department and general statements for the management. The management must have general statements that will show the true condition of all ends of the business, also statements that show the operations of all divisions and departments at all times in order that all branches of the work can be properly correlated.

The Purchasing Department must have reports that will show how much materials are in the different stores. Also they must know how fast the different materials are selling in order that they can keep a steady flow of materials coming so that the Manufacturing Divisions can draw on them for manufacturing purposes.

Our factory is divided into three Manufacturing Divisions. At Hartford we have the Brush and Ivory Divisions; at Toledo a Brush Division and all of these must have a number of records which interlock with the cost and store records.

Then there must be stores set up for our finished products, a general warehouse for all the finished products that are manufactured, also a store for each of the Distributing Stations. Each store must carry the cost of all items if we are to ship all orders within twenty four-hours upon receipt of same. All of these store records interlock with our Distribution Control and Accounting Departments.

Under our General Service Department are a number of sub-departments such as Order, Comptometer, Correspondence, Bonus and Commission, Ledger, Stenographic, Filing and Mailing Departments.

The Cost Department collects all cost data from the three manufacturing divisions and all departments in general. The Accounting Department records must interlock with the cost, stores, accounts receivable, banks and all books of original entry.

In order to render the best service to the men in the field the Sales Department must furnish certain data from week to week. This information is based on the number of representatives working, the average hours per week and reported sales. It can therefore, be easily understood how important it is that the reports made from the field shall be correct.

I have devoted practically my entire time the past eight months with the assistance of a firm of certified public accountants to designing records that will take care of the large increase of business which we are confident is coming in the near future.

THE LUNCH ROOM

Don't forget the dining room. Why bother to put up a lunch and have to carry it in crowded street cars when so good a meal is procurable right in this building.

The Burt's Box Bulletin, published monthly by The F. N. Burt Co. Ltd. in its news columns, thus gives publicity to the local restaurant.

The meal itself is a very good one, substantial and very reasonable, consisting mainly of meat, potatoes, vegetables, bread and butter, pudding or pie (some pie), tea, coffee or milk, all for the small sum of thirty cents—\$1.40 for a weekly ticket.

In this way The F. N. Burt Co. Ltd. has solved the dinner-pail problem—with the help of its house organ.

"THE LITTLE STORE"

In the pages of *Buddette*, the magazine of the employees of the Edward G. Budd Manufacturing Co., is an advertisement of The Little Store. The Little Store, for employees, has been busy all summer supplying Buddites with vegetables at very low prices. During the winter months the store will discontinue selling vegetables and traffic in potatoes exclusively.

The store policy is to sell standardized goods not "fancy goods." Commodities are sold cheaper than they can be purchased in the open market.

If it is found that The Little Store cannot sell our people these grades at a lower price than that offered by the usual retail store, then the work of The Little Store is finished.

The Little Store, developed by the welfare department, is not run for profit but simply acts as a medium between the wholesaler and the employee without the middleman coming in for a share of the spoils.

COVER TALES

The monthly messenger of the Diem & Wing Paper Co. is known as *The D & W Chats*. A noteworthy feature of this pocket-edition magazine is its covers.

Each cover is symbolic of the art of paper making. While the cover for June

shows the men hauling down huge trees and a small miniature picture of the paper machine, the cover for September depicts the ancient Chinese making paper on the banks of the Yangste Kiang. Another cover portrays the ancient Romans cutting paper on blocks against a background of the Roman theatre.

Each issue gives an account of the early paper-making industry which is illustrated on the cover.

EDUCATIONAL WORK

"A business grows as its men grow." This is the motto of The Training Department of The American Rolling Mill Co. In *The Armco Bulletin for Armco Men*, the magazine published by the employees, the work in the class-rooms is outlined.

The program for instruction includes the sciences, metallurgy, mathematics, drafting, office work and citizenship and English for foreigners. Courses are also given in salesmanship. No incidental fee is charged for any course except to non-Armco employees who are studying typing or computing machine technique. The fee in the case of non-Armco employees is \$4.00.

An Educational Committee co-operates with the Training Department in considering candidates for the teaching staff. The men and women who are engaged in the training work are chosen for their educational background and experience in the subject they are qualified to teach.

Several firms have been sending their salesmen to The American Rolling Mill Co. for instruction. In recognition of the training given to salesmen, the Training Department prints in the magazine:

Simply to tell an Armco customer that one is a member of the Armco organization is sufficient introduction.

PETROLEUM INSTITUTE

In these days when the oil supply of the world is causing grave concern, the matters discussed at a recent meeting of the American Petroleum Institute are of interest.

ADMINISTRATION

The Journal of Business Analysis and Control

APRIL, 1921

EVERY-DAY ECONOMICS

BY DON C. SEITZ*

ALL wealth comes from the soil or the sea. Its base is the product of the farm and garden, the mine, the oil or gas well, the stones and materials derived from the earth and the output of the forests, together with the fish, whales, or seals and the like taken from the waters, salt and fresh.

All else in the cumbersome load of life is but embellishment, for which the farmer, miner, lumberman, fisherman pays, either in the low cost at which he purveys the results of his labors, or in the high price at which he procures his luxuries or necessities as these are produced beyond his sphere or self-supply. It is inescapable that this should be the fact.

The proportion of wealth obtained by the producing class must therefore be measured by the cost of embellishing the raw materials, not only to the extent used by itself, but also plus the quantity required by those who make their livelihood in manufacturing, educating, keeping accounts, and money changing. The producer is as rich or poor as this overhead permits him to be.

It is true that the embellisher and the non-creative class furnish a market

for the raw material that would not exist but for the improvements made in its utilization, and that they should receive credit for such consumption as needs support their lives, but here again the burden is increased by transportation, the middleman, and the service required by non-creators, which must be added to the producer's load for the reason given in the primary proposition.

Land values and taxation are further factors in increasing the producer's difficulties. We have been passing from cheap to dear land in the United States, with oppressive rapidity.

On top of all the producer must carry the cumulative load of what is commonly called wealth, which is a representation of value in bonds, stocks, or currency based upon the ability or promise to pay. So long as dividends are provided and the government is sound, this "wealth" endures. Take away both and the securities become scraps of paper quite as worthless as a Treaty with Germany. We then have to fall back, as always, upon the soil, the forest, the sea, and the mine; the latter perpetually shrinking in value, the former valuable only as they are stocked or worked.

*Business Manager of *The World*, New York City.

II

If wealth in the world could be measured by the sums invested in, rather than those taken out of industry, we would be on a much more substantial footing. To this weakness must be added the volume of credit, enormous before the World War, and now colossal.

Credit is called the life of trade. It is also an elastic air cushion that is liable to flatten out suddenly when punctured by mishap or disturbed by miscalculation. It is probably correct to assume that half of the world's assets are paper-promises to be fulfilled. We know that the specie reserves of the nations do not represent one-tenth of the currency outstanding, dismissing the paper floods in Germany, Austria, and Russia as negligible.

It is plain, though, that without "capitalization" there cannot be wealth in the modern sense. The needs of the richest are no greater in the items of heat to warm, food to live on, and clothes to cover than those of the poorest.

Embellishment and show are different matters. The same may be said of housing, of methods of travel. It takes no more planking or shingles to cover a rich man than a poor one, nor does a millionaire occupy more room in a car seat than a hod-carrier.

Starting even, then, the primary needs of the millionaire and the hod-carrier are the same. But by capitalizing the ability of the worker to produce, the capitalizer is able to add to his necessities innumerable luxuries in the way of food, shelter, dress, and service.

In doing this, of course, he has to provide a place for the worker to exert himself. This he does in mine, factory, store, shop, or railroad. The load, however, indubitably gets back to

the points of starting, the farm, the forest, the mine, the sea.

The true increment should accrue most largely to the soil, for it produces in its bounty far more than its cultivator and his family require. One farmer can readily feed a thousand people and yet in so doing remain poor, because the return to him is inadequate, or the cost of what he must himself buy is far out of proportion to the price allowed for that which he sells.

As a case in point, I recall receiving \$2.64 for enough wool cut from one of my sheep to make two suits of clothes. Yet the lowest quotation I could get from a tailor at the time for a single suit was \$125.

William Allen White cites the swapping of a load of corn by a Kansas farmer for a pair of rubber boots.

Under the new freight schedules it costs more to carry coal, for example, to its destination than the fuel is worth at the mouth of the mine. This is another phase of the mounting overhead that comes from capitalization of an earning power, now much reduced by the enforcement of higher wages, all of which has to be paid, as I said, at the beginning by the producer, either in a lower cost of output, or a higher one for the manufactured product.

III

It would seem, therefore, that with the exhaustion of natural resources, wastage and over-capitalization must come to an end. The constant expanding of credit must cease and people must devote more energy to earning money and less to making it. One of the first great reforms should be the adjusting of all stock exchanges to the exact purpose of a market place, to which people who wish to buy for investment can repair and deal with those who desire to sell.

The state of New York is guilty of a supreme act of unfairness against the rest of the country in that it permits the usurious sale of call money in excess of sums of \$5,000.

The effect of this is to drain the country at times of its spare cash, the rural banker pressing his excess funds to the metropolis for the profits to be there gained in the speculative market. To this unfair competition is due much of the financial hardship that from time to time assails business. It does not represent earning power; it is pure pillage.

IV

By reason of over-capitalization, irregularity in marketing and too much intervening, the crops of farm and garden are over-weighted. They have to support too many non-producers while, on the other hand, the passion for conveniences has laid a heavy lien upon the consumer.

The greatest part of the increased cost of living, outside of war excesses, is to be found in the cost of convenience. The telephone, the delivery wagon, and package goods, are specimen items. Most of these save time that is put to no use after it is saved. But the bill has to be paid by the luckless, distant producer, upon whom in the end all of the burden falls.

The fifty million who live in towns and cities cannot fatten forever upon the fifty million who live upon the soil.

Permanent prosperity means that the producing class shall fare better, that capitalization must call a halt in its progression. The producer should divide more fairly with the laborer and the consumer be relieved of the unearned increment between. That labor should have a greater share in the say-soes of capital is not the remedy; to give labor the tools of capital is to make it capitalistic. It will at once proceed

to capitalize earning power just as the employer did, and regard its ability to earn six cents as the right to own a dollar!

V

To the farmer some reward should be returned that will enable him to maintain and improve production. There should be no exhausted acres, no abandoned farms.

The usual remedy is to suggest ways for financing him, by increasing his burden, making it easier for him to borrow on crops or mortgage his land. Neither of these is a remedy; both are to his disadvantage. What is required is that he should be freed in a greater measure from the capitalization of earning capacity in transportation and the industries which he must both support and supply.

Much of the capitalism in the world is based not upon development, but on devastation, its tax upon the community growing while its real assets diminish.

For example, great capitalizations are floated on oil lands and mines of all sorts. As these are pumped out or worked, their basic value is constantly decreased. The dividends earned, the wages paid, all represent a depreciation. In time the value will be completely destroyed and the stocks and bonds will cease to have any basic value.

Some concerns are so capitalized that they can retire their securities as the deposits fade but this is far from being the rule. Instead, the increment of profit seeps steadily out of the property and in time it runs dry.

When we speak of developing our national resources the words really speak their destruction.

But three things can be really developed, the soil, the fisheries, and water-power. These have in them the

essence of perpetuity. Everything else is on the road to destruction, or some form of alteration that ends in total loss. Silver and gold vanish in inexplicable ways. Iron and steel corrode and crumble to rust. Stone and brick as products of soil have a permanent character but these suffer ruin in fire. Machinery wears out. Scrap-iron does not return in the volume that ingots departed from the mills. Coal and oil completely vanish.

VI

We must, therefore, in all of our calculations for the far future depend upon the development of the rivers, the soil, and the sea. In our attitude toward the soil we have regarded it with the utmost unconcern. The forests form a fair example of our national heedlessness. Here is a perpetual source of wealth shamefully neglected.

There are estimated to be eighty-two millions of acres of land in the United States fit for nothing but reforestation. No move of any potency is under way to accomplish this. Yet it must come. It would be a great national blessing if we could turn to the forests of the Amazon for fifty years and let our lands recuperate.

In the matter of exhausting the coal supply, water-power should be developed to furnish power conserving coal for domestic use, else the time will come when dwellers in the North will have to migrate like the birds in winter to escape death from cold.

We should refill our forests, water and fertilize our farms, harness our rivers and the tides, cease to tear the hearts out of the hills and to empty the bowels of the earth in a reckless hunt for stock dividends; have more

equality between producer and consumer with minor margins for the in-between-service, which should be truly service and not speculation.

Then the planet will steady itself and if Utopia does not arrive forthwith, Ruin will be centuries remote!

VII

To suggest remedies is an easy commonplace; to create them a difficult matter; because we deal with the uncertain creature called Man. The competitive principle can be chiefly relied upon to break monopoly and destroy privilege, both evil factors in upsetting the equities in the struggle of life. Where competition fails co-operation can do much. Combination is no remedy, although the one most often applied. Co-operation means an effort to help each other; combination a scheme to get the best of somebody. Regulation interferes with the competitive principle and is apt to be capitalized into an unfair permanency. The great trusts all desire it, but it should find no public favor.

The wartime experiments all had to be paid for in subsequent disaster. Industry steadily enforced, each man doing his part, assuming his share of the burden, is the certain insurer of benefits to all. There is a theory that persists that men can lessen their labors without diminishing the return; more men on the job and a smaller output per man. This fallacy soon corrects itself but never disappears from the human mind.

"Something for nothing" still holds its lure, and this will-o'-the-wisp can only be routed by hardship and necessity, with hunger and cold as taskmasters!

THE ROUTINE OF CUSTOMERS' ORDERS

BY C. R. GRAY*

WHEN the farmer's wife goes a-marketing by mail she thinks, if she gives the matter a thought as she selects her household requirements from the mail-order catalogue, that her order is filled in the far-distant city in much the same way that her grocer fills her market basket locally. She does not know that between the receipt of her letter and the dispatch of her merchandise thirty persons or more handle her order. Were she informed of the fact she would probably think it mere male fussiness anyway. Yet if her order and thousands of other orders are to be handled within twenty-four hours after their receipt at a much lower cost for overhead than the overhead incurred in the filling of her market basket, such fussiness is inevitable.

II

A bird's-eye view of the routine operations through which a mail order passes is of interest to the management of every business faced with the problem of filling customers' orders from a number of merchandise or stock rooms and collating these orders in the packing room with the least lost motion. Such a bird's-eye view is presented on the accompanying chart. The study of this chart shows that there are twenty-eight operations in all, divided into five divisions of work, three of which are concerned with preparatory clerical work before the merchandise can be taken from the shelves, assembled, packed, and dispatched.

The secret of success in dispatching

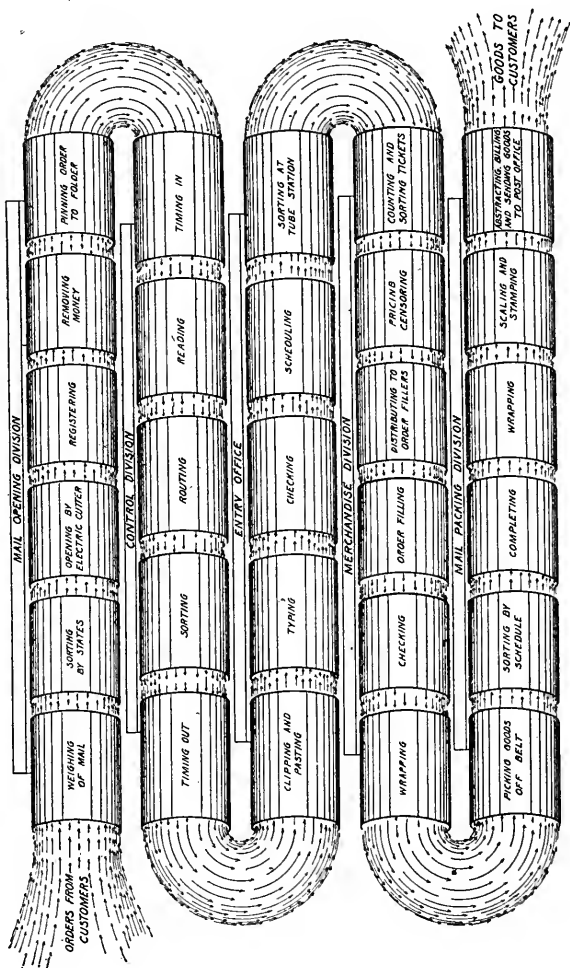
without a hitch and without delay several thousand orders calling for merchandise of a heterogeneous nature depends upon the division of the work into operations and the dispatching of a given number of orders to be filled, collated, and dispatched on a regular schedule. The merchandise and packing forces are so adjusted that a predetermined number of orders are handled within a given period of time. The control of the schedule is not unlike the control exercised on a railroad where the dispatcher knows the location of the trains dispatched from a certain yard or terminal throughout the day and night.

Beginning with the scheduling operation in the entry office (see chart) orders are dispatched on a ten-minute schedule in the sequence in which they are received. The dispatching is so arranged that a certain number of freight, express, and parcels post orders are assembled on the packing floor and shipped within the prescribed time. The assembling is done in sections according to whether the shipment is to be by freight, express, or parcels post.

When the morning's mail comes from the post-office, the first operation in the mail-opening division is to weigh the mail for the purpose of estimating the number of orders received. The volume of the mail varies with the time of year but experience shows a fairly constant average of orders per pound of weight. Having approximately determined the number that are to be handled during the day, the necessary number of sections to be set up on the packing-room floor is known and instructions are given accordingly.

*General Superintendent of Montgomery Ward and Company, Chicago, Ill.

COURSE OF A MAIL ORDER



III

The second operation in the mail division is to sort the envelopes by states according to the post-mark, at the same time abstracting the private or miscellaneous mail. The sorting by states is for the purpose of ascertaining the drawing power of the publicity by geographical location—information required for the guidance of the publicity and catalogue departments.

After the sorting by states, the envelopes are opened by means of electric cutters. Thereafter the first clerical operation is to enter in blue pencil on the top of the customer's order blank extracted from the envelope the amount of cash enclosed. A record of this amount together with the date of its receipt and the invoice number to be allotted to the order, is printed on it by means of a cash register which at the same time lists this information as to all orders.

As a further check on remittances they are listed on an adding machine and the total must agree with that of the cash register. The final operation in the mail-opening division is to pin to the customer's order blank a "folder" which consists of a sheet on which is entered the information required for the handling and dispatching of the order through the house. The nature of this information will be understood as the procedure is explained.

IV

Beginning with the work of the order reader in the control division the production of the various employees is measured, each receiving and handling a given number of orders every ten-minute period. The time when an order passes from the mail-opening to the control division is entered on the customer's folder. The operation of

reading is to prepare the orders for handling through the house. Different kinds of merchandise are classified in the catalogues by numbers and customers order by number. If only one kind of merchandise is called for the order is known as a "multiple."

The reader distinguishes between the different kinds of merchandise ordered by drawing lines between the different classification numbers written by the customer on the order blank. After indicating in this way the merchandise divisions from which the order must be filled, the reader checks at the top of the folder the method of shipment; freight, express, or parcels post. He now detaches from the bottom of the order a perforated slip by means of which customers requiring a new catalogue request that one be sent.

V

If the order indicates that the customer has made her selection from an out-of-date catalogue, the reader fills in the slip and in due course these slips find their way to the mailing department. If the order is to be sent freight or express and the customer has remitted the necessary charges, the top of the folder is stamped with the word "prepaid." If the order is to be sent by parcels post, the catalogue price of the merchandise indicates or includes the postal charges. Any irregularities in the shipping or postal charges remitted are handled by means of a green reference slip which flags the order for the attention of a special department where such matters are handled.

The next operation in the control division is that of "routing." By consulting a file of routing cards which lists all towns and cities alphabetically, the routing clerks are able to specify the railroad routing if the shipment is by freight or to indicate on the folder

the proper zone if the order is to go by parcels post. The final operation in the control department is to abstract from the customers card file the appropriate card and enter thereon the date of the order, its invoice number, the method of shipment, and the cash received. This record serves several purposes. The cards can be used as a follow-up for repeat orders, they can be referred to in filling future orders and they are handy for reference in investigating complaints. If the order is from a new customer a record card is headed with the name and address and the necessary information is added to the file.

The time an order leaves the control division is entered on its folder. In the entry office groups of entry typists, checkers, and schedule operators handle a given number of orders every ten minutes. The work of the entry typists is to copy or enter the customer's order on one or more house invoice sheets, there being a separate sheet for distribution to the different merchandise divisions. Thus a customer's order for one or more pairs of shoes is written on one sheet, for dry-goods of various kinds on another, and so on.

By the use of carbon sheets, the labels to be used in the packing-room, the slip giving instructions as to shipping, and a slip recording the name and address of the customer for the files of the publicity and catalogue departments are made out at the time the house invoices are typed. The customer's order, with the folder and the house invoices attached, then passes to the entry checker who checks each house invoice against the customer's original order after which the set of documents is ready to be scheduled, for which purpose it is passed to the schedule operator. With this operation begins the timing of each order through the house.

The purpose of scheduling is to enter upon the order folder the time each order is due for delivery to its proper section on the packing-room floor. As previously stated, the packing-room is divided into sections arranged in numerical order, extra sections being added as business demands. One section of freight and express takes care of 100 orders in eight hours. To a section are allotted 100 numbered baskets each of which is filled and emptied in eight hours; that is 100 customers' orders reach each freight and express section every eight hours to be packed and shipped.

VI

If a customer's order contains five items from different parts of the house, each of these five items with its individual invoice marked, say Tuesday, 10.30, Section 2, basket 31, will come together on the packing floor at the time and in the basket designated. Five hours are allowed from the time the order is scheduled in the entry division until it is due in a particular basket on the packing floor and two freight or express orders are scheduled for each section every ten minutes. In the parcels post section there are 20 baskets and 20 parcels post orders are scheduled to appear in these baskets every ten minutes. Thus a parcels post section handles 960 orders in eight hours.

Single orders which call for goods from one merchandise division only, are scheduled every hour and are wrapped and packed in the merchandise division from which the goods are ordered. Thus the work in the packing-room is confined to multiple orders that require assembling and collating in the various baskets.

After orders have been scheduled in accordance with the number of sections

being run that day, they are sent to what is known as the "dispatch balcony." Here the house invoices are separated from the folder and dispatched to the various merchandise divisions while the folder with the customer's original order attached is sent to the "forward files" on the packing floor where the papers are filed under the ten-minute period during which the order is to be packed and where the papers can be referred to by the order filling clerks if necessary.

When an order, that is a house invoice, is received in a merchandise division it is first inspected to see if the customer has ordered merchandise carried in that division and if so, whether the things called for are in stock. The correctness of the price remitted by the customer is also determined after which the goods are taken from the shelves or bin to the checking counter where experienced checkers compare the merchandise with the customer's requirements as indicated on the house invoice. If everything is in order sufficient wrapping is given the merchandise to insure its safe delivery on the packing floor, to which it is dispatched with the house invoice attached by means of chutes and belt conveyors.

VII

To avoid confusion in the sorting of orders preparatory to their delivery to the packing-room, no order is sent from a merchandise division more than thirty minutes ahead of the time scheduled for its appearance on the packing floor.

The belt conveyors run through the length of a department known as the "sorting balcony" parallel to the length of the packing-room. As the merchandise with house invoice attached travels along this conveyor, sorters examine the invoices to see

to which section and basket each piece of merchandise has to be delivered. After removal from the belt the merchandise for the various sections is again sorted by schedules. Thus the goods to be delivered to the packing floor on the 10.30 schedule, if this be the next on the time table, are placed in their proper basket and checked with the customer's folder, which the sorting clerk has procured from the tickler file, to see that the complete order has been received.

VIII

If for any reason a particular piece of merchandise fails to arrive on schedule time, the order becomes a "diverted order" which is pulled out of its section and handled elsewhere. It will thus be seen that the essential feature of the scheduling is to assemble a given number of orders at the same point and at the same time so that they can be delivered to the packing floor in one basket and thus save any confusion in the most onerous of all the operations, the packing and shipping of the goods.

When the packer receives a basket containing a parcels post order from the opposite side of the sorting balcony, he packs the order in one or more packages, as required, labels them, and delivers them to the scaler. As the postal zone is indicated on the label, all that the scaler has to do is to weigh the package and apply the necessary stamps. The package is then placed on a rack where it awaits delivery to the post-office located in the building. Before delivering the package to the scaler the packer detaches the house invoices from the merchandise and hands these documents together with the original order and the folder, to an "abstractor." The duty of this employee is to list the sales by merchan-

dise divisions—information required by the management for statistical purposes—after which the set of documents is passed to a “biller” who extends the total amount of the house invoices, adds to this amount any prepaid transportation charges, and subtracts the total charge from the amount of cash received, as recorded on the top of the original order. If the customer has sent more money than is required to cover the total charges, a refund check for the difference is attached to the bill; if there is a small deficit, a statement of the difference is attached, unless the credit is more than \$1, in which case the order is referred to the credit department to determine whether the package shall or shall not be sent “collect.”

Express and freight orders are handled in the same way as parcels post orders up to the shipping point. Express orders are delivered with two copies of the express receipt to the agent of the express company located in the building, who signs and returns one receipt. The agent also bills the packages and handles them with his own wagons to the various stations. Freight orders are delivered, with a bill of lading on which the items are properly classified for tariff purposes, to the shipping floor where they are placed in trap cars and routed to the various railroads operating out of the city. After the dispatch of the goods the routine of the clerical work is completed by mailing all customers' invoices by first-class mail.

THE STUDY AND PURPOSE OF STATISTICS

BY J. W. SCOVILLE*

A REPLY TO ARCHER WALL DOUGLAS

MUST statisticians defend themselves from their friends? Statistics, statisticians, and especially "trained statisticians," get rather rough handling at the hands of Mr. Douglas in his article on "The Study and Purpose of Statistics" in the February number of *Administration*. Mr. Douglas' case against statistics can be summarized briefly as follows:

Business men overestimate the extent to which statistics may be profitably used and labor under the mistaken belief that the trained statistician is the best analyst of the happenings of the day as affecting the commercial world and its most reliable prophet as to the future. Statistics, in the majority of cases, are imperfect, incomplete, and more or less inaccurate, and it is impossible to tell the degree of inaccuracy. Even the usefulness of census figures is "extremely limited." Statistics on agricultural yields are only "approximations of the actual facts." "Only a very small part of the facts in any situation can be reduced to figures." But every cloud has its silver lining, and the silver lining to the statistical cloud which Mr. Douglas describes, is "the traveling salesman," with his "dependable and complete story from thousands of retail dealers." As I recollect, history states that when Jefferson was dying, he said "Adams still lives." So we "trained statisticians" may die with the words of hope upon our lips: "The traveling salesman still lives."

It seems to me, in the first place,

that Mr. Douglas seeks to limit the field of statistics, which is extremely broad and which covers on the technical side a large amount of mathematical theory, and on the practical side such diverse topics as vital statistics, cost statistics, insurance statistics, statistics of crime and pauperism, etc., to the single field of merchandising. There are many people who work out sales quotas by territories and who study territorial markets and the buying power of the public, by states, by sex, and by social status. But it would be unfortunate, however valuable these services may be, if business men assumed that these activities were synonymous with statistics. The market analyst, as a rule, uses but little of the technique and principles that have been built up by statisticians. There have been many great statisticians who have never considered such ponderous problems as the number of cross cut saws that would be consumed per annum in Wisconsin, or who have never directed the full force of their genius to a determination of the number of watermelons consumed per annum in New England.

II

The advertising agencies have made market analyses for their clients; and to impress upon the clients the depth of learning that was brought to bear upon the subject, have used freely the rather awe-inspiring words—statistics and statistician. Perhaps the advertising men are to blame for the confusion, in the popular mind, of statistics and mar-

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ket analysis. But we will find no fault with the advertising men, for they have done their part in bringing statistics to the attention of business men. I have before me one of the best books on statistics—Yule's "Introduction to the Theory of Statistics."

Here are some of the chapter headings: Consistence, Association, The Frequency—Distribution, Averages, Measures of Dispersion, Correlation, Simple Sampling of Attributes, The Binomial Distribution and the Normal Curves, etc. No one who has read even sparingly in the field of statistical literature, will confuse market analysis and statistics.

III

Let us consider the charge that statistical data are often "imperfect, incomplete, and more or less inaccurate."

The only place where mathematics can be accurate is in the counting of units. If we count the number of persons in a room we will get an integer. There may be twenty persons in the room, but there will not be twenty and a third, unless the room contains cannibals. But when we attempt to measure a quantity, as the height of a tree, the weight of a man, or the velocity of a train, we find that perfect accuracy is unattainable. We simply establish a maximum and a minimum, and state that the true value lies between the limits we have established. And this method is quite sufficient for the conduct of practical affairs. When I buy a pound of butter of the grocer, I do not expect the butter will be weighed on a chemical balance. The time and expense involved in reducing the error to a grain, would come to more than the value of the butter. If we rejected those human activities that lacked somewhat of perfection, how much would be left of commerce, trade, and business?

The very fact that statistical data are usually in error, leads to the question of how large a sample must be studied in order to reduce the error to a predetermined size, and this leads us straight to the theory of sampling where only the "trained statistician" is competent to lead the way. Whole treatises have been written by statisticians on the theory of errors. Imagine a "traveling salesman" trying to solve the problem of how many adults it would be necessary to measure in order to get sufficiently reliable data for a clothing manufacturer to use in making up ready made suits! Commercial investigations are often either unnecessarily expensive because of too large a sample or unnecessarily inaccurate because of too small a sample, because the investigation is made by an investigator who is not familiar with the mathematical theory of sampling. How many "traveling salesmen" are familiar with the fact that it is necessary to quadruple the sample in order to halve the probable error?

IV

Mr. Douglas writes that "only a very small part of the facts in any situation can be reduced to figures."

From my experience with the multitude of reports issued by corporations, I am inclined to think that figures play a very conspicuous rôle in modern business. We might say that only a very small part of the facts in any situation can be reduced to medicine and pathology but it is in this small residuum that the physician functions. Legal procedure is usually a "small part of the facts in any situation" but, small as the place may be, it is the place where the lawyer functions. No matter how large or how small the part played by figures in business, it is in this domain that the statistician functions.

The most ardent advocates of statistics do not look to the science as a cure-all or as a panacea for all human ills. It is a valuable, but not an all-powerful tool, in human progress. We suspect that the rôle of figures in business is now very great and is ever growing greater. No one suspected that "figures" had anything to do with comets until Halley computed the path of the famous comet and predicted the time of its return. No one suspected that figures had anything to do with heredity until Mendel discovered the famous law that bears his name. As statistical science progresses, the social phenomena around us, which seem now to be as erratic as the patterns formed in a child's kaleidoscope, will be drawn more and more into the net of inexorable law. Already it is possible to predict, with considerable accuracy, the number of persons who will be killed in a year from automobile accidents, the number of annual suicides, and the percentage of firms that will fail in business in a given year. Even the frequency of occurrence in the United States of towns and cities of different sizes follows closely a simple mathematical law.

The number of cities in the United States having a population greater than p , is given by the formula:

$$N = \left(\frac{7,500,000}{p} - 7 \right) K$$

where K is a variable depending upon the population of the United States. If R is one hundred times the ratio of the population of the United States at a given time to its population in 1920, then K is given by the formula:

$$K = .0187 R^2 - 1.364 R + 49.4$$

For the year 1920, $K=1$, hence our first formula becomes, for 1920

$$N = \frac{7,500,000}{p} - 7$$

and the number of cities in the United States having a population between p and p' is given by the formula which follows:

$$N' = 7,500,000 \left(\frac{1}{p'} - \frac{1}{p} \right)$$

How many cities in the United States in 1920 had a population in excess of 100,000? The formula gives 68; the census figures show 68. If we consider cities of over 200,000, the formula gives 30.5; the census figures give 33. If we consider the number of cities of more than 60,000 population, the formula gives 118; the census figures give 119.

It might be considered that the frequency of American cities of a given size is something accidental and fortuitous; but study shows that even here, we are in the domain of mathematics. With a pencil and a sheet of paper, the statistician can count the cities in the United States at any time.

Statistics have even invaded the nursery. Professor Warren's formula for determining the cost of producing milk was the storm center in the discussion of the milk question in New York City.

Index numbers of commodity prices are used in practically every controversy over wages.

There are fakirs and charlatans in every profession; the fertile soil in which these artists of humbuggery grow is ignorance. To the extent that business men are ignorant, ignorant of economics, of science, of statistics, if you please, to that extent will their ignorance and credulity make them victims of the charlatans. The cure for this condition, however, is not to abolish statistics but to educate business men to a truer knowledge of the functions, power, and scope of statistics.

V

Coming now to the limited field of market analysis we believe there is something to be said for the statistician "at his desk in the fastness of some great city." At least, judgment should not be rendered against him in favor of "the traveling salesman" without a hearing.

After a presidential election, if we wished to get quick and accurate information on the election results, should we travel about and inquire of people as to how they voted, or would it be better to repair to "the fastness of some great city" and there to receive the telegraphic reports from thousands of election districts?

The machinery for the collection of trade statistics, consisting of both private and governmental agencies, has developed to such a point, that the man at the desk, in my humble opinion, gets a truer picture of our industrial life, than the man in the field. Thousands of statistical facts in regard to trade, production, immigration, bank clearings, building, transportation, prices, etc., are collected by hundreds and thousands of investigators and presented to the "man at the desk." In fact, the man at the desk can acquire statistical information in an hour of study, which, were he to accumulate it through first-hand observations, would require the rest of his natural life.

VI

Mr. Douglas writes: "Scattering reports come from department stores and mail-order houses in some large cities which tell of greatly reduced percentage of sales, but they are partial and local, and fail utterly to give any true index of the situation."

Let us test this sweeping assertion. I have before me figures on the monthly

sales of New York City department stores, on the monthly sales of printers in the United States, and on the bank clearings in the United States, exclusive of New York City. Index numbers have been computed for each group, the base (100) having the same significance in each case.

	Dept. Store Sales N. Y. City	Bank Clear- ings	Printers' Sales
October, 1919	115	119	120
November, "	107	111	112
December, "	121	121	138
January, 1920	123	121	146
February, "	110	99	127
March, "	147	125	157
April, "	140	117	154

Note that each index shows a decline in business in November, 1919, each shows an increase in December over November. Each index shows an increase in March, 1920, over January, 1920, and each shows a decline in April, 1920, from March, 1920. Even the sales of department stores in only one city or the business done in one industry, such as printing, is no mean index of the trend of business in the aggregate.

VII

I have had opportunity recently to examine the reports sent in by salesmen and I give below excerpts from the reports, covering a period of twelve consecutive weeks, when business was declining in the industry in question and in the entire country. These excerpts are from many different salesmen operating in different parts of the United States.

First week: "It is difficult to predict under existing conditions, yet we feel improvement will be noticed in the near future."

Second week: "This week's business was a little better than last week's."

Third week: "No change in the situation."

Fourth week: "It is encouraging to note that inquiries are more numerous."

Fifth week: "Business in is improving."

Sixth week: "The trade in general is rather optimistic as to the future."

Seventh week: "It seems to be the general impression among our customers that trading will gradually increase each week."

Eighth week: " everybody is optimistic about the future."

Ninth week: "As far as we can judge, business during the coming weeks will be better."

Tenth week: "This is regarded as a forerunner of better business."

Eleventh week: "Inquiries seem to be coming in better."

Twelfth week: "The situation here looks very good for future business."

Note the cheery strain of optimism that pervades these reports from salesmen. Yet the business in the twelve weeks covered was not improving. Of course some of the reports were less optimistic than those quoted. There are several reasons why the salesmen's reports are not "plain, unvarnished tales" of facts. By nature, the salesman is cheerful, optimistic, and these good traits often are at the expense of a critical viewpoint. It is not good policy for a salesman on the road to send in pessimistic reports to the house. The salesman on the road does not want the name of joy killer or calamity howler; he does not want to seem to be giving alibis. The salesman on the road is likely to send in a report which will please the sales manager. Reports from salesmen are likely to be filled with qualitative words, such as good, fair, better, improving, etc., whereas the statistician seeks a quantitative answer to his questions.

The statistician is not satisfied to know that business is improving or that prices are falling, he wants his answers in dollars, pounds, and percentages. If a company sends out traveling salesmen, it is desirable to receive reports from the salesmen on condi-

tions, not because the salesmen are naturally good investigators but because they are on the job to sell goods and the information which they send to the home office is a by-product which does not cost much.

The home office, if it is wise, will have the reports sent in by salesmen analyzed by a "trained statistician" who will mix in with the reports the necessary number of grains of salt.

VIII

Mr. Douglas brings up two definite questions, the duration or cause of the present slump in business and the reason why farmers are holding grain, as instances where statistics are of less value than the reports of salesmen. Now what do the traveling salesmen have to say?—"that the ultimate consumer will probably begin to purchase more freely when he *feels* that prices have reached a more reasonable level." But when will this "*feeling*" come into being? Would the report from the salesmen not be equally illuminating if it stated that business would resume when it resumed? How low will prices need to fall until the consumer "*feels*" they are at a "reasonable level." Will he "*feel*" differently as a buyer than he "*feels*" as a seller? Have not the traveling salesmen simply shifted our problem from statistics to psychology?

I fail to find in Mr. Douglas' article the answer to the question he raised on why the farmers are holding grain. Perhaps this is an example of the blind leading the blind.

Many business firms are in trouble today, not because of inefficient purchasing, selling, or production, but because there was no competent person in the business to tie-up the activities of the particular business with general business developments. The time has

gone when each business man may operate successfully as a law unto himself. The successful business men of the future will give more, rather than less, attention to statistics. Business is a huge fabric which envelops the world. Changes anywhere cause tremors in the entire structure.

Competent statisticians saw the panic of 1920 coming months before the storm broke. Those who heeded the warnings and prepared for the storm were probably in the minority. There is too much contempt today in business for what some business men dub "mere theory." There are still too many decisions made on hunches instead of upon careful, methodical investigations. Snap judgments are usually poor judgments. Business should distrust profoundly the executive who acts from intuition rather than from reason. But reasoned judgments presuppose, not only a large body of facts, but an analysis of those facts which shows their interrelations. This analytical work is the logical field for the statistician.

The progress of statistics in business has been an evolution. The first statistician was perhaps the merchant who recorded his transactions by notching a stick or making a pile of stones. The bookkeeper was superseded by the accountant; then came the cost accountant; and then came the statistician. It is impossible to say just where the work of one stops and the work of the other begins. The statistician, being the last at the table, may have to content himself with the crumbs which the others leave.

In a general way, we may say that the work of the statistician in business will be to compare and analyze data submitted by other departments; to study, in a scientific way, the business organism; to connect the particular business with the larger industry of

which it is part; to forecast future needs, conditions, and developments; to collect pertinent facts from whatever sources available; to make, from the vantage point furnished by a study of the activities of all departments, suggestions as to business policies; and to bring to business whatever assistance higher mathematics and statistical technique may give. The statistician must be primarily a philosopher, a student, and a scientist. He must be eclectic. I fear the man with a system. He must have broad knowledge and broad interests. To such men, business in the future will pay high stakes.

We can forgive the statistician if he sometimes guesses wrong. A chess problem may be set up with only four or five pieces on the board, which requires hours for a good chess player to solve. If it is difficult to solve a problem in chess where the rules are definite and where all the facts are known, how much more difficult is the solution of economic problems, in which the rules themselves are changing, and with a multiplicity of factors to consider?—where every human motive enters as well as material things. Confronted with difficult problems in economics, shall we drop the pilot and put the cook in charge? Shall we despise reason because there are mysteries it has not yet illumined? Shall we dethrone the trained thinker because he is not yet omniscient? Progress does not lie this way. We will unravel the tangled skeins of economic events; we will pile facts upon facts; we will analyze and dissect; we will bring more and more of the phenomena of industrial and economic life into the realm of predictable events by the discovery of the underlying laws. Mere figures, mere theory, that is the stuff out of which we must largely build our material prosperity.

THE RETAIL MARKET AND ITS ANALYSIS

BY PAUL WESLEY IVEY*

RETAIL marketing costs constitute the largest percentage of the difference in price spread between the manufacturer and consumer. One of the many reasons for this condition is the lack of an analysis of the quantity and quality of merchandise which any market is capable of absorbing. For the most part, retail purchasing has developed along narrow lines.

During the past century, the dominance of a seller's market made unnecessary any close scrutiny of market peculiarities or even an ascertainment of the degree of market saturation relative to any particular line of goods. The advantage was with the seller of merchandise and the customer took what he could get. At the present time, however, with a more sluggish but more discriminating demand, retailers are being forced to investigate their market possibilities to provide a ready absorption of their product. Where such market analyses are not being made by retailers, they are made by wholesalers and in some cases by manufacturers. For whoever makes the analysis the important object is a determination of the consuming power of the population as to quality and quantity of goods.

The methods employed by many retailers in purchasing their stocks of merchandise, indicate their failure to realize the tremendous reversal in market emphasis which has developed within recent years. Custom still dictates the character of much retail purchasing, although the increasing pressure of goods is making itself felt.

In the prevalent retailing system, however, there are five outstanding defects each of which will be given separate consideration in the following order.

1. Long-time credits, discounts, bargains, or special prices on large orders influence the valuation of goods offered by the jobber or the manufacturer.

2. The purchase of certain lines of goods has been based on friendship for the traveling salesman.

3. "Standard" goods carry no advantage in some markets yet retailers often purchase them because they consider them "standard."

4. For some merchants the purchasing of certain lines of goods is based on habit.

5. Some merchants purchase from certain jobbing houses because of a feeling of obligation toward them.

Unless the defects are rapidly eliminated by scientific market analysis the tendency toward integration will become more pronounced, and, as a result, independent retail units will become of less importance in the marketing system. This matter needs careful attention to avoid such defects.

The first defect in present retail purchasing methods to be considered is the selection of goods because of special inducements, such as long-time credits, quantity, and extra discounts and bargains, offered by the jobber or manufacturer. Each of these chief inducements to divert the retailer's attention from a scientific appraisal of his market and the effect on retailer, jobber, manufacturer and public of the overstocking which results when such inducements

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are allowed to exert undue influence are taken up in detail in the following paragraphs.

II

The number of merchants who are attracted by the idea that they can buy now and pay for the goods in one, two, or even three months,¹ and, in the meantime sell the goods, is surprising. If the trade is going to come into a store and demand that line of goods, the results of such a policy are satisfactory; but if the public does not desire this particular line or changes its mind about it, then the goods are on the merchant's hands and will have to be sold at a loss.

Several unknown quantities are found in the equation of buying, and the nature of the demand is one of these. When goods are purchased on long-time credit, the retailer rarely attempts to determine the unknown factor. He assumes that the goods will be purchased by the public within a certain time but does not command evidence to substantiate its assumption. Forced sales and loss result. What this loss would amount to for all merchants throughout the country, one could only hazard a guess, but that it would be tremendous no one will deny.

Offers to the merchant of special prices on large orders have been productive of short-sightedness in buying, and accounts, in many instances, for large stocks of goods that fail to move from the shelves. Only one who has seen the tremendous overstocking of goods among the merchants in the smaller towns can understand what a dead weight rests on the back of the majority of retailers, and yet they almost invariably believe that they are saving money by buying in large orders. Only rarely has one of these

merchants been heard to admit that he was overstocked, and even then, nothing more than a guess could be made as to what lines were in excess. This lack of knowledge of the existence of overstocking, makes education especially useful, and, where it has been given, flatteringly productive.

That the merchant in most cases² loses money by this method of purchasing can be shown by an illustration. Suppose a merchant every month buys an article that costs him 75 cents a dozen and sells a dozen every month at the price of \$1. At the end of the year this merchant has turned this 75 cents twelve times, making 25 cents every time, or, in other words, has made \$3 on an investment of 75 cents.

Then a specialty salesman comes along and says, "You are paying too much money for those goods. I can sell you that same article for \$6 a gross."

It looks like a saving so the merchant takes a gross. During the year following this purchase he sells a dozen a month or the entire gross, at a profit of \$6. In other words, he has made \$6 on a \$6 investment, or 100 per cent, while under the former method of buying he made \$3 on a 75-cent investment or 400 per cent.

When it is acknowledged that this hypothetical case represents actual conditions and could be multiplied by many lines in any one store, it will be realized what a tremendous saving could be affected by a different method of buying. Instead of permitting the \$6 to carry *one* line, it should be more fully utilized and made to carry *twelve* 75-cent lines. The jobber would be forced to function as a warehouse instead of the store, making, not only for better appearance but for larger retail profits.

¹ During a period of rising prices this method of buying can often be justified to a limited extent, but if carried very far becomes speculation pure and simple. The buyer then tries to liquidate before a falling market brings him loss, not merely in sales but in inventory.

² Ninety days credit is almost obsolete now.

Thus it must be evident that all parties concerned—the jobber, the merchant, and the public, would benefit by a more rapid turnover of stock. The jobber cannot hope to build up a permanent trade by stocking merchants with goods that will not move. He may make immediate gains but this policy continued will force his customers to the wall and make necessary the formation of trade connections with new dealers. Unfortunately, jobbers are only too often shortsighted and persistently continue to “load” merchants until the latter are forced into liquidation.

Often the direct cause for such failures is not ascertained by financial investigators, and classifications such as, “lack of funds,” “incompetence,” or others equally inaccurate are used to indicate the reasons for insolvency, when, in reality, these are only *conditions* of failure, not *causes*. On the surface, lack of capital often appears as the fundamental reason for going out of business when this condition is caused by wrong buying methods. Most merchants have sufficient capital to carry the necessary number of lines and meet contingencies, but they do not conserve it; they let much of it lie idle.

But even if it is to the advantage of jobbers to overstock retailers, or if they continue this policy against their own interests because of the ignorance of their salesmen or for other reasons, it is plainly to the interests of the merchant to thwart such attempts whenever possible. When overstocked the merchant is handicapped because of a lack of capital, his profits are lower, the number of clearance sales with all their attendant disruption of routine are increased, the appearance of his store is less favorable to attracting trade, the congestion of stock often interrupts the speedy finding of goods and rapid con-

summation of sales, and, most important of all, his salespeople forego the stimulating effect of the frequent arrival of goods.

The public is too interested a party to permit such a condition of affairs to continue. Buying in this manner means less variety of goods that can be offered to customers, poorer service, loss of time, and higher prices. The latter is true because the interest charges on the stock are greater, and in many cases a lack of funds caused by this inefficient use of capital prevents taking up discounts, the use of which would have permitted a lower selling price.

A growing realization on the part of the buying public of the disadvantages of such methods of buying, gives promise of better conditions. But greater progress can be made if retailers will quickly realize their position as public servants whose existence is justified only to the degree that the public is efficiently and adequately served.

The manufacturer also is vitally interested in the purchasing methods of retailers. Slow-moving stocks mean less ready capital with which to pay bills promptly and purchase new stock. With unattractive goods customers are not exploited and only partial saturation of the trade territory results. This slowing up of the stream of goods is causing manufacturers to make investigations of the consuming power of communities, so that the retailers may be stimulated to study their opportunities and make more intelligent purchases. The retailer must speed up his selling or meet the competition of speeded up retail stores owned by manufacturers.

To offer extra discounts and so induce merchants to buy a particular line is a common practice and where the goods are of the right kind it can be

justified; but too often the merchandise is of such a nature that it can be disposed of only by extraordinary means, in which case it is safe to assume that the merchant gains nothing from the extra discount. Such goods usually cost the retailer more in the end than those on which a lower rate of discount was offered. While retailers realize that customers pay for premiums offered with certain articles, they often fail to see that extra inducements in the nature of extra discounts are in reality premiums that are held before the eye in order to obscure some uncertain qualities in the goods themselves. When this and other unscientific methods of purchasing are followed, the retailer fails to look objectively at the trade territory or market, contenting himself with superficialities and overlooking the real *raison d'être* for the goods on the shelves.

III

The chief inducement used to divert the retailer's attention from a scientific appraisal of his market is bargaining. Perhaps some jobbing house has gone to the wall, or has had a fire, or, for some other reason, has a stock of goods that it wants to be rid of. An alluring price is placed on the job lot and a clever salesman unloads it on some retailer who does not think clearly. It is no doubt true that some real bargains are secured in such cases but more often the retailer is ensnared in the same mesh that he uses to attract customers to his own bargain sales.

Human nature seems to be the same whether found in retailer or customer; a bargain appeals strongly to each and for the time that it is held before their eyes it seems disproportionately attractive. Of course, salesmen understand the necessity of laying all the emphasis on the strongest buying

motives, hence this activity is not profound in its complexity. The marvelous feature of such transactions is that the uppermost buying motive of retailers should be what it is.

The prominence of the motive to "get something for nothing" must give way to others whose existence will further more precise and accurate purchasing, if retailers are to furnish a satisfactory outlet for large-scale production.

Friendship for the traveling salesman has been found to be the chief reason for some retailers purchasing certain lines of goods, although the latter were unconscious that this was true and were reluctant to admit it when appraised of the facts.

When the line sold to retailers by means of friendship has coincided with the results secured from an investigation of the market as to what should be sold, quantity and quality considered, no harm has resulted; but obviously such a coincidence could exist only by accident. Friendship has usually resulted in blinding the merchant to existing conditions, for a knowledge of which have been substituted highly colored and strictly hypothetical conditions prepared and held in view by the salesman. As in the case of bargains, sales are made because of attack through a vulnerable point.

The quality of friendship is with some merchants, as with men in other occupations, a prominent characteristic, overshadowing and subordinating all others, and making the possessor one-sided and incapable of unbiased judgment. To such, friendliness on the part of the salesman is of unjust magnitude and all other considerations sink into the background. Lines, better qualified to meet local conditions, receive no consideration partly because of lack of friendliness on the part of the salesman representing them, but more

because of loyalty to the friendly salesman representing the other line.

It does not necessarily follow that the salesmen who ingratiate themselves with this type of merchant are entirely conscious of their own activities. Perhaps they are the "born" salesmen type who make up in friendliness what they lack in the knowledge of their goods. Whatever the source of their influence, it remains that such friendship between merchant and salesmen is exceedingly costly to the former as well as destructive of self-discipline to the latter. And when this friendliness stimulates a merchant to leave one jobber and go to another because a certain salesman has left the former for the latter, several cases of which have been found, it assumes proportions that become a menace not only to the retailer but to the public as well.

IV

Retailers often purchase goods because they are nationally advertised and considered "standard." Nationally advertised goods carry no advantage in some markets and when the practice of confining purchases to this class of goods is followed many important factors in the buying equation are overlooked. What is considered "standard" by some classes of people is not always recognized as "standard" by others. The supposition that all classes of people view merchandise from a certain standpoint, has, as its premise, the fallacy that all persons are educated equally regarding it. Many cases are known where retailers have purchased lines advertised in standard magazines rather than to put on their shelves the goods of an obscure manufacturer, even though the latter carried a larger percentage of profit.

Some nationally advertised goods seem to have won their place in the

store simply because of their ubiquity in the magazines read by the retailer. The very persistence of these advertisements has misled the merchant, for he has assumed that those in his trading territory or market have been equally educated and impressed. Only too often this has not been the case.

From an investigation of the social and economic conditions in a typical township in Iowa, it was found that only one family in fifteen was a subscriber to a standard magazine, only one in every ten took a religious paper, and only one in every three subscribed to some daily newspaper. From this it would seem that many merchants are not getting what they are paying for. In other words, they are accepting a lower percentage of profit per article because they expect a larger volume of sales due to national advertising; when, in reality, the sales of the nationally advertised article may not be much larger, if any, than those of obscure brands, simply because the magazines in which they appear do not have a wide distribution in their market. Not having carried some obscure brand, the retailer naturally cannot know whether the advertised brand is the means of producing more sales.

It would seem that the dictates of self-interest would impress upon any merchant the necessity of acquainting himself with the extent of the national advertising in his market. A survey should be made to ascertain what per cent of the potential buying public were subscribers to the magazines in which the goods were advertised. With this information any merchant could quickly decide whether it would be more profitable to buy nationally advertised goods carrying a small per cent of profit, or private brands carrying a more generous margin.

A magazine survey might be made by any individual merchant, but since

the character of the magazine subscriptions in the community is a matter of interest to all merchants, it would seem that such a survey could best be planned and carried out through the organized facilities of a commercial club or community organization. Moreover, just as it is more difficult and often impossible, to say nothing of being more expensive, for any one individual security-holder to ascertain the true character of the property represented by his certificates, than for an organization of brokers, bankers, or stockholders to obtain such knowledge, just so is it more difficult and expensive for any individual merchant to attempt to find out the nature of the magazine subscriptions in the market than for an organization to collect and disseminate the data.

But however secured, such a survey will repay any ordinary expense connected with it. In many cases merchants will find that they have been sacrificing profits for years by carrying certain lines around which the salesman or themselves have created a halo of public recognition. To ascertain what the public is willing to buy rather than to assume its attachment to certain lines because of national publicity, is a change in point of view that should mean more profit to retailers and the purchase of goods that are more acceptable to the consumer. Assume nothing, ascertain everything, is a safe policy for merchants to follow in purchasing. The market must assume greater significance than store convenience or retailer opinion.

With some merchants the purchasing of certain lines of goods is nothing more nor less than a habit. Some temperaments get into well-defined mental grooves more rapidly than others, and it is apparently as hard to get out of them as it is to break a physical habit. A habit shortens the time

necessary for the performance of an act, and it is probably because of this fact that it is usually allowed to direct the purchasing of goods. Habitual tasks can be accomplished in a surprisingly short space of time but tasks that demand specific attention require a longer period for accomplishment. To make buying automatic and to avoid the irksomeness incidental to continued application, seems to be the aim of some retailers. In other words, some merchants are mentally lazy and seem to be exhausted by concentrating their attention on any problem for any length of time. Like any other laziness this kind can be dissipated by work. Close attention to marketing problems is the only means of creating vigorous thought regarding them.

Needless to say, purchasing cannot be made automatic; it cannot be performed in an habitual way. Ideas are changing too rapidly to permit stability and uniformity of quantity, quality, and style in goods. It is only in more or less routine work that habit can play any great part. Some merchants, no doubt, wish that styles and other characteristics of goods were more stable; but their hopes are no determining element in actual conditions. Only too often men of this type substitute the imaginary for the real; and then it is that habit becomes a vicious factor in business. The situation reminds the writer of this article of a building contractor who refused to put fire-places in his houses because he said the public was foolish to demand them. The fact remained that the public did demand fire-places and were willing to pay for them; and they got them, regardless of what the contractor thought.

Buying is the chief problem of merchandising. The old saying, "goods well bought are half sold," contains much truth. To buy goods of the right quantity, style, and quality is

perhaps one of the most intricate and difficult of arts and can never be reduced to routine. Neither can it be turned over to inexperienced employees while the proprietor uncrates goods at the rear of the store. If the merchant has real merchandising ability, a large part of it will be expended in scientifically purchasing goods.

Accounting matters, store arrangement, window decoration and other important duties can be standardized and turned over to others to supervise or perform, much more easily than can the function of buying. It is true that others can gather data on which buying judgments may be based, but the important fact remains that the judgment itself must be made by the person with the greatest merchandising ability and experience, and in the smaller establishments he is usually the proprietor. The most difficult and exacting work should be done the most thoroughly and by those best qualified to perform it.

V

Some merchants purchase from certain jobbing houses because of a feeling of obligation towards them. A sense of obligation may have developed because a jobbing house stood by the merchant, or gave valuable concessions when he badly needed them, or provided some other service of importance. That the merchant owes a debt to the jobber who has extended him credit at a critical time in his existence or who has given him any other valuable service, goes without saying. Yet this debt can be repaid at a ruinous rate. For a merchant to buy goods of a jobber because the latter has befriended him, is usually to pay a high price for that service. It would be far better for the retailer and the public if the former paid for this service at a money price considered fair by all parties con-

nected with the transaction, than for him to feel obligated to purchase in ignorance of the demands of his market.

Anything that tends to divert the attention of the merchant from the real reason for buying, i.e., the nature of the demand, is a dangerous obstacle to successful merchandising; especially if the object of distraction is itself attractive. The enticing behavior of siren jobbing houses should not blind the retailer to the ultimate disaster that lurks nearby.

The extra services that some jobbers perform are real and of money value but the retailer must be wary of all such attractions; he must chain himself to the steering wheel of duty and run his business craft where his chart and compass indicate, and that is in the direction of the rapidly fluctuating and highly sensitive demand.

In the preceding paragraphs dealing with inefficient methods of purchasing the writer has pointed out that the purchasing of a great many retailers is defective because certain matters receive undue consideration and preclude an interpretation of market tendencies and possibilities. Conversely the basis of efficient purchasing lies in ascertaining, judging, and accumulating facts regarding the demand for goods, and in formulating from these facts generalizations or principles that will serve as an accurate guide in purchasing merchandise. These processes must be in continual operation as the conditions with which they are related are in constant movement and subject to change. The buying equation includes many variables which cannot in all cases be determined accurately, but their value and significance must be estimated on the basis of known facts which in their turn have been carefully gathered and evaluated. The goods finally purchased will thus represent many interrelating and highly changing factors; just as the course of any steamship is

the result of many conditions, such as the velocity of the wind and the current, the humidity and the temperature, as well as the internal conditions of the ship itself.

Even those dealers who make an effort only to estimate marketing factors, realize that the more factors they take into consideration the less inaccurate will be their decisions as to purchasing. The difficulty is that too many retailers feel they are equipped to estimate the conditions that affect the demand, and that analysis is unnecessary in determining their significance. What many believe to be an estimate is, in reality, only a guess; and it is little wonder that so many business superstructures collapse when their foundations are an unknown quantity. Demand is the foundation of all retail business and its nature and extent must be known, not guessed at. Human nature is a highly changing factor in the buying equation, and consequently, the greatest discrimination in gathering data and the most unbiased judgments in weighing facts should be used. It is with all these difficulties of the situation in mind that the "trade survey" as a method of market analysis is presented.

The purpose of the trade survey is to ascertain in terms of money value a community's consuming power. This information is secured in the following manner. From the production figures at mill-cost price for any commodity in the United States, as found in the United States Census, is subtracted all exports of the same commodity, and to the difference is added all imports. The mill-cost consumption figure for this commodity thus obtained is then multiplied by the average retail mark-up,¹ and the product represents the gross sales of this commodity.

¹ The retail mark-up can be ascertained for several communities and averages struck. Information of this character sufficient for purposes of a trade survey has already been collected.

The per capita consumption of this commodity can then be found by dividing its gross sales figure by the population of the United States. The per family consumption can be found by dividing the gross sales of the commodity by one-fifth of the population, while the consumption of the commodity for every man sixteen years of age and over can be determined by dividing the gross sales of the commodity by thirty-five per cent of the population.

From these consumption figures for all lines of commodities, the consuming power of any community can be ascertained in terms of money value provided the boundaries of the community can be defined. For example, if it was found that each family in the United States makes an average expenditure on groceries of \$228, in order to get for any community the total consumption figures for groceries it would still be necessary to determine how many families could be considered as economically included within that community. At first thought it might seem that this determination of a community's trading population (often known as its trade territory or market) is a purely arbitrary matter.

This is far from being the case, although some writers have indicated that, on the average, every city should draw from a territory that embraces a population equal to 40 per cent of itself.

It is obvious to the reader that many conditions determine the extent of trade territory of any city. Geographical conditions are often very important in freeing a city from outside competition or in handicapping it in the race for trade. Extraordinary, fair and comprehensive merchandising methods may have been the means of some cities including in their trade territory 75 per cent of their own popu-

lation. All of which indicates that each city must be considered as an individual case from the standpoint of a market.

The trade territory of a city must be taken to include the population of the city and all outlying districts that are directly and naturally tributary to it. This includes outlying territory that, for any reason whatever, does and should trade in the nearest city. In most cases the population of these country districts will be more or less than 40 per cent of the population of the city that forms their trading center. If villages having retail stores are included in this city's market, usually some fraction, not easily determinable, must be deducted from the city's trade territory in order to get a fair figure of the city's trade possibilities. The retail facilities of both city and villages will have to be taken into consideration in determining where the trade boundaries of one community end and the other begin. Of necessity communities overlap, but nevertheless they usually have boundaries that are more or less natural in character and that serve to differentiate aggregations of people with common interests.

VI

While what constitutes the market of a city can be determined in the manner indicated, it is, nevertheless, true that the extent of such a market varies with different lines of goods. For example, it has been found¹ that the trade territory of a city is much larger for ladies' ready-to-wear apparel, dress-goods, jewelry, books, furniture, pianos, dry-goods, and men's suits, than it is for implements, lumber, groceries, drug store sundries and phonographs.

Because of this fact it would often be

misleading to assume that a certain district should comprise a city's market for groceries because it is the city's market for ladies' ready-to-wear. Accuracy in determining any city's market can be secured only by considering its peculiarities.

Not only a quantitative but also a qualitative market analysis should be made. Knowing the number of stoves a community should consume does not indicate the kind of stoves it is using or the changing trend of demand. This knowledge can be secured only by constant contact with the consuming public and personal investigations of what is in use.

In a hardware store in a town of 900 an investigator discovered nothing but cheap stoves. On being asked why he did not carry some high-grade ranges, the retailer replied, "They want cheap stuff in this town."

The investigator, going to the telephone, called up sixteen housewives to ask them, "What kind of a stove have you in your kitchen?"

Twelve out of the sixteen had a certain well-known standard brand of range. They had purchased the stoves out of town.

In some towns the investigator found that women were purchasing their shoes out of town because the styles sold in local stores were not to their liking. Watching the feet of people as they walked past the stores would have been a most enlightening market analysis for the shoe dealers of that town. Sometimes a house to house questionnaire or canvass has indicated what customers wanted and what they were using.

These and other plans of qualitative market analysis mean goods more to the customer's liking, less carry-overs, a lower marketing cost, and a more satisfactory outlet for the manufacturer's product.

¹"Where Farmers Trade," p. 8. The Capper Publications, Topeka, Kan.

AN ANALYSIS OF PROFIT-SHARING PLANS

BY P. L. BURKHARD*

PROFIT-SHARING has become a common term. It implies that in some manner the profits of an enterprise are to be shared between the management and the employees. The purpose is two-fold; to reward result, and to stimulate efficiency. It does both, and it does neither, depending upon the methods of application. Profit-sharing has been taken to mean many things. Some regard it as being a 50-50 share in profits. The Winship Boit Company have stated that provisions are made in their plan to absorb losses in somewhat the same manner as profits are shared.

It may be possible to operate such a plan in which workers share in profits and losses, but even under the most favorable conditions this presents serious difficulties. In the first place, unless labor turnover is negligible, which it is not in most plants, the organization which shares in profits will no longer be composed of the same people, and new faces will have to share the losses. Furthermore, the man who consents to such a plan may change his mind when under depression the profits dwindle and a loss results. He may object to sharing in losses and he may state his objection at that time by quitting. Matters of this kind cannot be prearranged, as is evidenced by the change in mind of workers who break contracts over wage rates before the contract with the employer is fulfilled. While this theory regarding the absorption of both profit and loss reads well, it is regarded by the well informed as unsound.

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II

Profit-sharing has maintained its prominence due to the growing desire of good management to meet the conditions of a new industrial day. Thought has changed so remarkably within the past few years that progressive employers now seem to be competing with each other in their desire to play square by the men in the shops.

Labor is entitled to its share, or the true value of its productive effort. As Abraham Lincoln said in the year 1847, "To secure to each laborer the whole product of his labor, or as nearly as possible, is a worthy object of any good government." He might have added that not only is this a worthy aim of good government but of good management. When labor can be shown that it is getting its share of the product, the labor problem will resolve itself into a joint effort on the part of employer and employee to increase the total product in order that the share may be greater. In other words, the labor problem will be a joint problem for greater efficiency and industrial economy.

Cleveland is a representative industrial community, and in Cleveland industries practically every known plan of profit-sharing is now in operation. The Committee on Labor Relations of the Cleveland Chamber of Commerce submitted a report to the directors on January 12 which classifies various forms of profit-sharing as follows:

- Profit-sharing plans (6 types, 8 concerns)
- Limited profit-sharing plans (8 types, 17 concerns)
- Stock sales plans (9 types, 29 concerns)
- Bonus plans (9 types, 53 concerns)

This would seem to indicate that there has been no loss of interest in the idea. It is further evidence of the desire of management to pass on to labor some proportion of the profits which have accrued during the post-war era of inflation. The Browning Company reports that approximately 96% of the employees participate in the plan as operating, all employees being eligible after three months. At the end of each quarterly period there is set aside out of the net profits, exclusive of taxes, an amount equal to $1\frac{3}{4}\%$ on the outstanding capital and surplus as a fair return on the invested capital. Of the remaining profit 10% is then set aside for distribution among the employees. It is said that the installation of the plan was prompted by "intelligent selfishness," and it would seem to prove something when it is noted that the average annual production per man for the past two years has been 26.7% greater than in the years before the installation of this plan.

III

Annual distribution of profits is made by the Cleveland Twist Drill Company. After providing necessary reserves, dividends of 8% on the invested capital are paid out of the net profits. The remaining profits are divided between the stockholders and the employees in the ratio of invested capital to pay-roll. The share varies with the length of service and the individual earnings during the period. The company feels that the plan has helped to increase efficiency, to stabilize the working force, and has improved relations between the company and the employees. The plan was established in 1915.

It is interesting to note that one plan combines to take care of shop men and salesmen in the same breath. The

Astrup Company provides for a return of 8% on the invested capital to be paid out of the net profits, and that an amount equal to 12% of the invested capital be set aside for expansion and development of the business. The remaining net profit up to 25% of the invested capital is distributed to employees exclusive of salesmen, and the profit above 25% of the invested capital is divided equally between stockholders and employees, including salesmen. The share is paid annually, and as the plan was installed January 1, 1920, so far only one participation has been enjoyed.

The W. S. Tyler Company plan was adopted in 1914 and provides that out of net earnings, 6% interest is paid on the capital stock. Employees employed continuously for six months or more participate in all cash dividends, receiving a dividend on their wages for the preceding period at the rate paid on the capital stock. This plan was installed primarily not to increase efficiency but to benefit the employees and permit them to share the prosperity of the company. The loyal force in the plant, however, may be in part the result of consideration such as this.

The other two types of complete profit-sharing plans are in selling organizations. The plans are, however, equally interesting from the point of view of manufacturing. The Underwood Typewriter Company provides for distribution of profits to all employees of two or more years' service. Of the net profits, excluding amortization funds and dividends, 20% is set aside for employees. This fund is divided into ten parts, five parts being distributed to employees of five or more years' service, three parts to employees of from three to five years' service, and two parts to employees of from two to three years' service. The parts set aside are invested for the em-

ployees in stock of the company. The plan was adopted as a rainy-day measure, so that a fund would be available when most needed. It was established in 1916 and has met with the enthusiastic approval of the participants.

The Willys-Overland Company plan was adopted in January, 1919, and is the same plan which went into effect at the factories in the same month. After setting aside out of the net profits $7\frac{1}{2}\%$ on the permanent capital as a return to capital, 3% to cover depreciation, and 1% as a contingency fund, the company divides the remaining profits 50-50 between the stockholders and the employees. The employees share is prorated on the basis of wages earned during the previous period, the periods being quarterly. All employees of six months' service are eligible to participation, and payments are made in cash. It is difficult to gauge the success or value of any plan over the past year due to conditions in the automotive industry, but the company feels that the plan has justified itself.

IV

Seventeen Cleveland concerns have limited profit-sharing plans, there being eight distinct types according to the report of the Chamber of Commerce. The name of the company using the first type has been withheld. It is a unique plan in that the superintendent submits to the president a list of employees who, in his opinion, are entitled to share in the profits. The list is limited to the employees whose ability contributes appreciably to the success of the business, approximately 12% participating. After 6% is paid on the capital and surplus and a necessary percentage is retained for development, the company divides the remaining profits between the stockholders and

participating employees in the ratio of capital and surplus to the pay-roll. The plan, as outlined, was established in 1917.

V

The Cleveland Tractor Company believes in rewarding the management of the business and expects the management to justify the participation. Twenty-five men, or 2% of the force employed, participate in the management group. Fifty-seven men, or nearly 5% of the total number employed, participate in the department head group. Sixty men, or 5% of the total force, participate in the assistant department head group. A certain percentage of the net profits of each quarter is set aside for distribution among the participating employees. The fund is distributed as follows: 25% to the management group, 20% to the department head group, 15% to the assistant department head group, and 40% to be distributed at the discretion of the board of directors. An individual shares in the funds allotted to his particular group in the proportion which his salary bears to the total salaries of the group. Payments are quarterly and in cash. The plan was established in January, 1919, and has increased the efficiency of shop management.

The plan of the Hydraulic Steel Company confines itself to members of the executives', managers', or operators' groups, but this number has been extended to take in approximately 25% of the employees. A certain percentage of the profits above 8% are set aside for distribution. This pool is divided equally between the senior and junior organizations, the first being the managers and the second the operators. The senior organization's money is divided into shares, the distribution being made as an award. The execu-

tive committee recommends the number of shares so awarded. The junior organization's share of the profits is divided among the individual members on the basis of wages and length of service. The plan was established in 1911 and has paid from a business standpoint, being operated in the four plants of the company.

The Kaynee Company distributes profits to approximately 6% of the total number of employees, that is, to those people who are in a position to affect the profits of the company. This plan is strictly a reward to the management of the business and has helped in developing managerial ability. The payments are made annually and at the discretion of the management. The plan was established in 1914.

The B. L. Marble Company provides for profit distribution to responsible salaried employees. After the necessary reserves have been provided, 10% of the net profits is set aside for distribution. The fund is prorated among participating employees on the basis of monthly salaries and payments are made in cash monthly. The plan was established in 1919.

The Reliable Stove Company has had a plan providing limited profit-sharing since 1910, but which was improved in 1920. Foremen, warehouse employees, assistant foremen, engineers, shipping clerks, and office employees, approximating 10% of the total number employed, are eligible. After necessary reserves have been provided and 6% has been paid on capital invested and upon surplus, 10% of the remaining profits is set aside for distribution. Each employee shares in the proportion which his sales above \$1,000 bear to the total of such amounts for all participating employees. The share of the employee is held until the accumulation is sufficient to purchase

one share of the company's stock for each \$100 of the employee's annual salary. The plan formerly included all employees earning over \$1,200 yearly, but employees not in executive positions failed to appreciate the plan and the change was made in 1920 to take in shop executives and office employees only.

VI

There are 29 industries in which plans are in operation which give the employees privileges of accumulating stock in the company. Strictly speaking, this is not profit-sharing, yet it must be admitted that if employees own stock they are in line to receive the profits in proportion to the stock they control. The oldest plan of this group in operation in Cleveland is the plan of the American Steel and Wire Company, established in 1903. All employees are eligible to participate in this privilege. In 1919, employees were permitted to subscribe to the common stock of the United States Steel Corporation at the price of \$92 per share. Payments as low as \$2 monthly were accepted. Employees earning \$690 or less were permitted to purchase one share, those earning \$690 to \$1,533.33 were permitted to purchase two shares, and so on up to ten shares at \$8,740.01 to \$9,660. This is an investment privilege which has been taken full advantage of by the more intelligent employees.

There is much to be said for profit-sharing. One thing which stands out above all others is the purpose, the thoughts which have been behind the formulation of these plans. The question always arises as to whether or not such profit-sharing plans can make good. That depends altogether upon what is meant by "making good." An analysis of the Cleveland plans brings one to the conclusion that profit-shar-

ing plans can make good if one does not expect too much from them. If a direct return is expected in proportion to the participating fund, it is safe to say that the plan will not make good in case the fund is distributed among any appreciable number. Sufficient experience has been had with profit-sharing to permit the formulation of definite laws as to the application of any of the possible plans.

VII

Opportunities for participation in profits stimulates the higher executives and the management from the president down to the subforeman, the incentive becoming weaker as it is offered down the line of the organization till finally to machine operators, skilled and unskilled laborers there is little or no encouragement. The scope of participation may be called the first law of profit-sharing with the note that the point of diminishing returns is to be fixed somewhere between the duties of the foreman and his assistant.

A second law, the relation of the share to the result, broadens the scope of the first. If the value of productive results is determined and the profits distributed according to results, the scope of participation can be extended just so far as the relation of profits to results can be determined.

The third law is the law of period of distribution. The greater the periods between the times of distribution, the more remote and farther removed is the share in relation to result. This makes an appreciable difference when the participants are not a part of the managing and supervisory force. Periods of distribution should be regulated by the scope of participation.

The nature of the share is the fourth law. The nature of the share, influenced by the three previous laws, has

much to do with the effectiveness of profit-sharing. When the scope of participation is limited, payments can be made in any form without bad effect; when extended to employees, however, lump sums may be cause for trouble when the period of distribution is infrequent.

In the light of these laws let us consider profit-sharing in general, viewed as a plan for stimulating efficiency and rewarding the deserving. In the plans now in operation in Cleveland neither and both of these results are accomplished. Good has resulted in many instances—there can be no question about it—but the good is unmeasurable and intangible in the majority. Management cannot afford to distribute profits promiscuously over the next few years. Profits cannot be distributed unless there is a relation between the profit distributed and the work delivered, which has produced this profit. In other words, there must be an application of the law of relation of results to the share. If profit-sharing plans are to justify themselves this relation must be accurately known and clearly recognized. This requires consideration of the participants as individuals. Employees do not produce averages under adequate incentives, and one man produces, therefore, in excess of another. Though they happen to be on the same wage, or on the same hourly rate, it is not a sound arrangement that they should share alike, since a share should be in relation to the result.

VIII

Consideration of the scope of participation should determine the point of diminishing returns. This point will vary according to the ability to measure the relation of result to share. It may be that under a complete application

the results produced by every person in the organization will be susceptible to measurement. In such case results in proportion to profits will permit computation of the individual share. At any rate it is generally accepted that the managerial and supervisory force of an organization is stimulated by participation in profits.

One of the serious objections to profit-sharing plans in the past has been the remoteness of the participation. No association has been created in the minds of the participants regarding the distribution of profits and the work that made the distribution possible. The farther down the line the scope of participation extends, the more frequent the periods of distribution must be. Lump-sum payments become less effective as the scope of participation is extended, since the point is raised by the men of less intelligence that the funds have been withheld from the pay. When funds are distributed in the form of stock certificates the nature of the share has a good influence upon all participants in the plan.

IX

It is the purpose of this article to show that profit-sharing can be made effective, but the plan must be based upon scientific industrial management as a fact, not as a theory or a hope. Profit-sharing is not, however, a basic pay system. It must exist as an additional incentive and reward after the perfection of the basic pay system. Unless the pay system is sound and already rewards result in proportion to its true value, that value being the ratio of standard time to hourly rate, profit-sharing is but a makeshift to cover up the inadequacy of the existing system.

How can it be done? Very easily, by reducing all human effort to time values

and measuring this effort by time units. The most effective means of measuring human effort is by the point system. A point is one minute of standard work plus a margin of rest and delay. All jobs and operations may be so analyzed that standards may be established in point values. The standard for an eight-hour day is, therefore, 480 minutes' worth of standard work. Standard in this case is what the manager has a right to expect from every worker as an honest day's work. Increased individual effectiveness makes it possible to cut down the margin which is allowed as a part of the standard. An efficient worker can produce, therefore, in excess of the standard day's work, possibly as much as 600 minutes' worth of work in an eight-hour day.

With standards established in time value for all jobs, operations, and duties in the works, worked out by the same formula, the point production of all employees is indicated. Such a system permits the calculation of result to profit, as every minute's worth of standard production bears a relation to the profits of the business. It remains a very simple task to distribute profits in relation to the productive value of the producers. But before anyone considers profit-sharing, the basic pay system must be right. Under a point system it naturally follows that operators should be on an hourly rate. To stimulate individual activity for result it would not be safe to wait upon a profit-sharing plan to reward the workers. The hourly rate should be paid for production up to standard, but when a worker performs 550 minutes' worth of work in an eight-hour day, he should receive 550 minutes' worth of pay. The incentive becomes immediate. The difference between 480 and 550 minutes is 70 minutes. Premium, at the full value of these minutes, should be paid as the immediate

incentive because it has been earned. All labor, direct and indirect, is susceptible to the same analysis and study. Standards should be set on all duties from those of the general manager to the janitor service.

X

The point value of all employees gives daily data as to the contribution of every cog in the machine to the profits of the business. Under such a plan the scope of participation can be universal, the relation of share to result is automatically recorded, the periods of distribution can be more frequent, and the nature of the share can be decided by judgment. Profit-sharing is possible in the true sense of the word when there are profits to be shared. There can be profits only if there is effective productivity, and before this is possible a pay system which rewards in true proportion to the productive effort must be established. In the development of scientific manage-

ment as such, the road is being paved for profit-sharing, but unless the road is so paved the results to be obtained from profit-sharing will be intangible and unreal, the rewards will be distributed according to best opinions, which is a haphazard method, and the power for good will be greatly handicapped.

The Cleveland plans are truly illustrative of the plans now in vogue throughout the country. They are well intentioned and have some influence for good. Some have accomplished more than others because they have been more in keeping with the laws affecting distribution of profits. None, however, have established the relation between result and share. Only such plants as are operating with a sound basic pay system can establish this relation.

It may be noted, by way of conclusion, that while profit-sharing may be both possible and profitable, it is more essential that employees receive their true proportion in the weekly or twice-a-week pay envelope.

THE PURCHASES BUDGET

BY JAMES O. MCKINSEY*

THE amount of goods which is to be purchased by the merchant is determined primarily by his estimate of future sales. Goods are purchased only to be sold, and sales can be consummated only when goods are available for sale. The general manager of a store is charged with a double responsibility; he must maintain such stocks as will enable the store to fill orders and, at the same time, he must avoid the accumulation of a stock which is beyond sales demands with the consequent loss arising from the capital tied up and the probable obsolescence and deterioration of the merchandise. He can meet this responsibility only by anticipating sales demands and setting up as nearly as possible a schedule of deliveries to stock which will meet, but not exceed, these demands.

The first step in merchandise planning, therefore, is the determining of the amount of future sales; the second step is the determining of the purchases necessary to meet these sales; and the third step is the setting up of a purchasing program which will co-ordinate the deliveries of purchases with the sales deliveries required by the sales program. The first step has been previously discussed. The second and third will be dealt with in this article.

An ideal purchases program would provide for the delivery to stock of the exact amount of merchandise sold that day. In a mercantile store such a program is not feasible for two reasons: (1) The customer desires an assortment from which to select his

purchases. This necessitates the keeping on hand of a considerable quantity of merchandise, the amount depending on the sizes, varieties, and grades kept for sale. (2) To provide against a failure to meet sales demands, it is necessary to keep a certain amount of merchandise on hand.

The problem of purchases requirements resolves itself, therefore, into a problem of finished stock requirements. An estimate of finished stock requirements necessitates, first, an analysis of the probable sales of each kind and class of goods; secondly, a statement of the inventory of finished goods that has proved sufficient to meet the sales requirements of preceding periods. This analysis and report are used as a basis for an estimate of the finished goods inventory requirements, throughout the coming selling period.

The stock requirements of previous periods are contained in a merchandise account that shows the quantities of each item received at cost contra to the amounts of the same item sold at cost. The resulting balance shows the amount of each item on hand and its cost. Such a merchandise account is commonly known as a perpetual inventory. A perpetual inventory should show the cost of goods delivered from the vendor and the value at cost of goods sold. The net figures will indicate at all times the goods on hand. Such data may be analyzed to show balances on hand at the close of each week or month. This analysis needs to be subclassified to show the average length of time that each item of merchandise remains in stock. This information can be readily computed by

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dividing the average amount of the merchandise on hand into the cost of sales for the period. The result will indicate the fractional part of the year that a dollar's worth of each kind of merchandise has remained in stock. In making such turnover computations, care must be taken that the sales and the inventory are both valued at the same price.

Perpetual inventories are often expensive in their operation especially where many small items are bought and sold and where the average turnover of

the gross profit. The ending inventory must be determined before the equation can be solved. This can be accomplished by estimating the average gross profit during past periods, and this percentage is applied to the sales of the current period to obtain the gross profit for this period. To illustrate, if it is found that the average gross profit of the Brown Manufacturing Company during the past three years has been 26.66 per cent and it is thought that the average is indicative of the profit of the current month by taking this

THE BROWN MANUFACTURING COMPANY

PROFIT AND LOSS STATEMENT FOR MONTH ENDING DECEMBER 31, 192-

Sales	\$51,000.00
Inventory, December 1	\$16,500.00
Purchases for Month	34,100.00
	<hr/>
Total Merchandise in Stockroom during Month	\$50,600.00
Inventory, December 31	13,200.00
	<hr/>
Cost of Goods Sold	37,400.00
	<hr/>
Gross Profit on Sales	<u>\$13,600.00</u>

the stock is high. Many merchants in consequence content themselves with estimates proved as to their accuracy by actual count once or twice a year. The estimate is based on the fact that the actual inventory at the beginning of the period, plus purchases for the period, less sales at sales price, plus estimated gross profit equals the estimated inventory at the end of the period. The method of arriving at this formula will be seen if the following trading section of the pro forma statement of profit and loss is considered. From the foregoing statement, it is possible to prepare the following equation:

$$\text{Sales} - \text{Beginning Inventory} - \text{Purchases} + \text{Ending Inventory} = \text{Gross Profit}$$

In the preparation of a statement of profit and loss there are two unknown quantities: the ending inventory, and

percentage of the sales for this month, the estimated gross profit is calculated to be \$13,600. By using this figure, the equation given above can be stated as follows:

$$\$51,000 - \$16,500 - \$34,100 + \text{Ending Inventory} = \$13,600$$

By transposition and solving, the Ending Inventory is determined to be \$13,200. Since the gross profits on different lines of goods varies, it is necessary to perform the foregoing calculation for each line of goods if an accurate estimated inventory is to be obtained.

In some businesses, where it is not feasible to maintain a perpetual inventory because of the cost involved, and where it is not possible to obtain an accurate estimated inventory because of the widely varying rates of gross profit, it may be necessary to take

actual inventories at frequent intervals. Some department stores take an inventory in certain departments every two weeks. Such a check-up is especially desirable where fashion and styles play an important part in the sales of merchandise.

II

If any rational control is to be exercised over stock investment an inventory must be taken at regular intervals by any of the methods discussed in the foregoing paragraphs. If it is necessary to know the value of the stock on hand only at the beginning or the end of the period, a physical inventory may be taken; if this knowledge is necessary at more frequent intervals, the inventory must be estimated at regular intervals or stock records established. Of course, the oftener the inventory is taken, the more useful are the statistics in determining average inventory and in controlling the stock investment. In any case, the desire for accuracy must be balanced against practicability.

In making estimates of turnover and inventory, it is necessary to refer to the statistics of previous periods as shown by the accounting records. As to how many past periods will be considered will depend on the circumstances of each case. It may be that conditions have changed so rapidly that it is deemed wise to use only the statistics available for the preceding period; on the other hand, the preceding period may be abnormal and be disregarded entirely. In some cases a weighted average of three or more past periods is taken. In any case, the object is the same: to obtain the statistics of past operations which will be most helpful in planning future operations. For the sake of brevity, in the following discussion, reference will be made to the "past period" or "past periods" with-

out defining the length of this period or periods unless such definition is necessary to make the meaning of the discussion clear.

Whatever method of taking inventory has been followed during the past period, it should be possible to determine, at least approximately, the average inventory and the ratio of the average inventory of the past period to the sales of the same period. In other words, the turnover for the past period can be determined. Whether or not the turnover, as thus determined, will be used as a basis of planning stock control for the current period will depend upon whether the average inventory of the past period is deemed to have been satisfactory or unsatisfactory. It may be either that the inventory was too large and the turnover too slow, or the inventory was too small for the volume of sales which were possible. For instance, the sales of the past year may have been \$400,000, the average inventory \$100,000, with a resulting turnover of 4. But the merchandise manager may know that in the case of many articles a much larger inventory was carried than was necessary to meet the volume of sales, and that with a smaller inventory the same volume of sales may be obtained. On the other hand, he may know of many articles, the sales of which could have been increased, if a larger variety or assortment had been carried, or if the goods desired by the customer had always been on hand when called for. He may rightly decide, therefore, that the turnover of the past year is not satisfactory as a basis in determining the average inventory during the current year.

The foregoing illustration indicates two facts of importance in connection with inventory and turnover. First it indicates that it is unsafe to take average turnover, that is, the average turn-

over of all lines carried, especially if many lines of goods of different varieties are carried in stock. Consequently it is necessary to determine the turnover of each type of merchandise. Secondly, it indicates the need for the intelligent consideration of statistics of past operations and their modification in the light of past experience before they are used as a basis of future plans.

Whether the turnover of the past period is deemed satisfactory or is modified as suggested above, after it is finally determined, it is used in connection with the estimated sales of the current period to arrive at the average inventory deemed necessary to meet these sales. The process involved is illustrated by the following steps:

1. Sales for the past period \$500,000
2. Average inventory for the past period. 100,000
3. Turnover for the past period 5
4. Estimated sales for the current period. 600,000
5. Then the estimated average inventory for the current period is . . . 120,000

It is, of course, assumed in the foregoing illustration and discussion that the inventory and sales are both stated at the same price, either both at selling price or both at cost price.

It is stated in the foregoing discussion that the turnover figure of the past period may be modified in the light of experience, before it is used in estimating the average inventory for the current period. But the inventory thus determined represents what would be a satisfactory inventory under the conditions of the preceding period, and it is not always safe to assume that the same conditions will continue during the current period. Consequently the estimated average inventory, as determined by the method shown in the preceding paragraph may be modified by consideration of the anticipated market conditions of the current period. It may be thought desirable to purchase a

large amount of stock early in the period because of an anticipated increase in price, or because it is anticipated that there may be congested traffic later, or because of other conditions. On the other hand, it may be thought desirable to let the reserve stock fall below normal because of an anticipated fall in the market price. Changes in the class of customers may increase turnover, making a smaller inventory possible. For instance, a large inflow of war workers during the war period increased the sale of cheaper goods in some cases and made a more rapid turnover possible. On the reverse, an attempt to cater to a more fastidious trade may tend to necessitate a large inventory in order to provide the proper variety. Comparisons of statistics of past years by lines of goods, territories, and class of trade will help in determining the modification necessary to arrive at the proper estimated inventory for the current period.

If sales fluctuate to any great extent, it will be necessary to determine the inventory desired at the beginning of each month. Then in order to determine the deliveries to stock to be made during the month, it will be necessary to add the estimated sales at cost for the month to the estimated inventory at the end of the month and subtract the inventory at the beginning of the month. It can be seen from the foregoing that the *normal* inventory, that is, the inventory estimated to meet the sales demands, may not be an average inventory, but may fluctuate from month to month as the sales fluctuate owing to seasonal demands, etc. In many cases it may be desirable to make the finished goods schedule in terms of the number rather than value. For an illustration of the preparation of a schedule of deliveries of finished goods, it may be assumed that the New

York Department Store which makes a specialty of high-grade pianos in its furniture department desires to set up a schedule of deliveries to stock of a certain grade of pianos, during the months of November, December, January, and February. Such a schedule may be in the following form:

that 50 per cent of the purchases during the past three years have been on terms of 2/10, n/30, and that the payment is always made within the discount period, then that 50 per cent of the estimated purchases made during the next period will be paid within ten days after receipt of invoice. On this

NEW YORK DEPARTMENT STORE—FURNITURE DEPARTMENT

X-Y PIANO

SCHEDULE OF DELIVERIES, NOVEMBER 1 TO FEBRUARY 28

MONTH	STOCK BEGINNING	SALES	STOCK ENDING	DELIVERIES TO STOCK	MEMORANDUM
Nov.....	16	32	14	30	Xmas. season begins November 15
Dec.....	14	21	10	17	Xmas. season ends December 18
Jan.	10	17	15	22	January Bargain Sales begin January, 1920
Feb.....	15	32	8	25	Bargain Sale ends February 20

A similar schedule of finished goods deliveries will need to be prepared for each item of finished stock. If the schedule is made in terms of value, the only difference will be the method of stating the quantity in each column.

III

The foregoing discussion has dealt only with the method of securing a co-ordination between purchases and sales. The finished goods budget shows the deliveries to stock. From the viewpoint of financial requirements, it is necessary to determine when the goods delivered are to be paid for. The method of doing this will depend on the volume of purchases to be made and the terms on which they are purchased. It may be necessary to classify all purchases made by terms of credit so as to obtain the data by means of which an estimate can be made as to amount of the purchases which will be made on cash terms. For instance, if it is found

basis two-thirds of the merchandise delivered during a certain month and purchased on these terms will be paid for during that month, and in addition it will be necessary to pay for one-third of the merchandise purchased on these terms during the preceding month. In the same manner, estimates can be made for disbursements made in payment of merchandise purchased on each kind of terms. The errors which may arise in making such estimates are apparent. There are a number of factors which would influence their exactness and estimates of cash receipts and disbursements can never be made with absolute exactness. The cash balance is maintained to provide for this inaccuracy in the same manner that the inventory of finished goods is carried to provide for the inaccuracy of the sales and purchases estimates.

As a means of controlling the disbursements for purchases and of providing data for the financial budget,

an estimate may be made on a form with the following columnar headings:

1. Item

2. First Month:

- (a) Inventory at beginning of month.
- (b) Estimated deliveries to stock during month.
- (c) Estimated orders to be placed during month.
- (d) Estimated inventory at end of month.
- (e) Estimated cash disbursements for purchases made during previous months.
- (f) Estimated cash disbursements for purchases made during the month.

3. Second Month:

- (a) Inventory at beginning of month.
- (b) Estimated deliveries to stock during month.
- (c) Estimated orders to be placed during month.
- (d) Estimated inventory at end of month.
- (e) Estimated cash disbursements for purchases made during previous months.
- (f) Estimated cash disbursements for purchases made during the month.

4. Third Month:

- (a) Inventory at beginning of month.
- (b) Estimated deliveries to stock during month.
- (c) Estimated orders to be placed during month.
- (d) Estimated inventory at end of month.
- (e) Estimated cash disbursements for purchases made during previous months.
- (f) Estimated cash disbursements for purchases made during the month.

It is evident that the form can be used for a budget period of any length. As the longer the period, the more inaccurate the estimates for the latter part of the period are apt to be; they should be revised monthly on the basis

of the monthly reports, showing actual sales, actual purchases, and actual disbursements.

This report provides information which is of value not only in judging the advisability of the contemplated purchasing program, but also the advisability of the contemplated sales and financial programs. The most important items of information which it shows are the following:

1. The estimated deliveries to stock during the month. This can be checked against the same item on the schedule of deliveries to finished goods to determine the accuracy of the amount as shown on each statement.

2. The estimated orders to be placed during the month. This enables the executives to curtail them if necessary and indicates the probable demand for funds for the payment of vendors' claims.

3. It shows the estimated inventory at the end of the month. By comparing this with the inventory for the beginning of the month, it can be seen whether the purchasing program contemplates an increase in the inventory. If so, the reason for this increase can be ascertained.

4. It shows the disbursements during the month for purchases made during previous months. These are disbursements which presumably must be met since the contracts are already made. This is useful information for the treasurer.

5. It shows the estimated disbursements for purchases made during the month.

Thus the estimate of purchases as a whole provides information which is useful in estimating the financial requirements of the contemplated sales program. If such requirements are too great, a revision of the sales program may be necessary.

IV

In so far as possible the purchases estimate, like every other estimate, should be made by the individual or individuals who are responsible for its enforcement. In a business with branches, if the branch manager makes the purchases under the supervision and functional control of the general purchasing agent of the company, each branch manager should be held responsible for making an estimate of the purchases of his branch. These original estimates should be gone over by the general purchasing agent and later by the central executive authority responsible for the approval of all estimates. Revisions may be necessary, but the branch manager should make the original estimate for two reasons: (1) He will take more interest in its execution if he is responsible for its preparation. If he receives an estimate prepared by someone else, he may not feel as much responsibility for any variations between the actual and the estimated. (2) In the making of his estimate, the branch manager must study past operations and plan future ones and this study and planning will be of much value to him. It will bring to his attention many things which he would otherwise not notice.

In a department store the head of each department is responsible for the preparation of the estimates for his department. These will be gone over by the merchandise manager, the treasurer and by the central executive authority, responsible for their approval, for the purpose of making such revisions as seem necessary.

In a business where all purchases are made by a central purchasing department under the control of a general purchasing agent, the purchases estimate may be prepared under his direction but he will usually obtain the as-

sistance and advice of subordinates in its preparation.

The purchases budget provides a working program for the current period. But this program is based on estimates and these estimates, however carefully made, may prove inaccurate because of market conditions which could not be foreseen at the time the estimates were made. It is necessary therefore to have certain records and reports to make possible a revision of the purchases budget throughout the year, if the results of the year make such a revision necessary. Such a revision is not a simple task in the case of a department store where quotas are made out months in advance on thousands of different items. Perhaps the simplest way to make the changes is to compute the percentage that the delivery quota for the month is to the estimated sales for the month. Thus, if the estimated sales are 43 units and the delivery quota is 38 units, we may express the quota as 88.3, so that if the actual sales are 51 units the delivery into stock will be 88.3 of 51 units or 45 units. For obvious reasons this percentage method does not give a quota that will result in the exact inventory at the end of the month that we originally planned. But this use of percentages is decidedly useful for revising large numbers of quotas to meet wide discrepancies between estimated sales and actual sales.

If purchase quotas are made up for each month the responsible officer will require a monthly report showing the following information for each item on which he has set an estimate of delivery and stock:

1. Estimated sales for month.
2. Less gross profit estimated.
3. Estimated sales for month at cost.
4. Purchase quota for month.
5. Per cent of quota to sales at cost (per cent of 4 to 3).

6. Actual sales for the month less gross profit.
7. Revised quota, per cent in 5 to actual sales in 6.
8. Delivered to stock during month (taken from purchase account).
9. Balance in quota not delivered or excess delivered over quota.
10. Purchase orders outstanding under quota not delivered.
11. Balance in quota not ordered or excess of ordered over quota.

The amounts given for each item or line of goods in the first money column will be taken from the last revision of the sales program. In columns 3 and 4, a comparison is made between the delivery to stock quota on each item and the estimated sales at cost for the item. It must be remembered that estimated sales are taken at cost so that there may be this comparison between sales at cost and purchase quotas at cost. In column 5, a percentage of the quota to sales at cost is shown for each item. The data for column 5 is not taken from the accounts but is the result of dividing estimated sales at cost into quotas. The actual sales for the month shown in column 6 will be taken from the sales as reported in the sales accounts of the month, from which total the estimated gross profit is subtracted. When an actual inventory has been taken at the end of the month, actual gross profits, as shown by the accounts, should be subtracted. The revised quotas given in column 7 may be made by applying the quota percentage given in column 5 to actual sales at cost as given in column 6. The amounts of deliveries into finished stock, as shown in column 8, will be taken from the purchase accounts. The orders outstanding as shown in column 10 will be taken from an order register if a book record of orders is maintained or outstanding orders may be found by adding unfilled orders on file in an unfilled order file.

If a monthly quota system is maintained on stock deliveries, the unfilled orders at the end of a month furnish useful information to use as a basis for purchase control. It may be that unfilled orders represent poor buying or a lack of co-ordination between the activities of the purchase department and the other departments of the business. In any case, the reason for such unfilled orders should be determined and such executive action taken as is necessary to remedy the condition.

Control reports are a necessity to the head buyer of a store if the activities of the various assistant buyers are to be co-ordinated so that they all work to a common end. He makes use of purchase quotas and the subsequent reports on these quotas for the unification of the plans of his buying organization. Thus the quota set up on article S. 485, a shoe, may be co-ordinated with the quota set up on article H. 563, a silk stocking, because both the shoe and silk stocking are of a certain color, shade, and quality, and are expected to be sold together in many cases. Similarly quotas on staple articles may be planned with reference to certain proposed bargain sales, and quotas on certain specialties with reference to their use as liners.

V

The foregoing discussion points out the necessity of records and accounts for purchases and the need for records or files for fulfilled orders if data are to be available for the preparation and control of the purchases program. But this data must be available in such form as to make this control comprehensive and not unduly burdensome. In order to do this, it is necessary to maintain a proper classification of purchase accounts and purchase orders. The classification for the preparation of the

monthly report discussed above is indicated by the report itself. For the purpose of this report, the purchase accounts must analyze the purchases into the same classes by which they are shown on the purchases budget and outstanding orders must be classified in the same manner. For instance, if the purchases budget states a separate quota for twenty types of purchases, there must be twenty accounts maintained with purchases or some supplementary record must be kept which provides for such a classification, if the monthly report outlined above is to be used effectively. The outstanding orders must also be subject to such a classification if the desired information for column 10 is to be obtained. But if this report is to be properly interpreted after it is made, additional information with reference to purchases made and orders issued, must be available and to obtain this information it is necessary that other classifications be maintained.

Purchases in addition to being classified to correspond to the analysis shown on the purchases budget may be classified as follows:

1. By departments or units of responsibility.
2. By terms of credit.
3. By buyers.

In a business where there is any attempt toward functional organization and control, both sales and purchases are usually classified according to departments or units of responsibility. Expenses are classified similarly, and consequently the efficiency of the functional managers can be judged in terms of profit and loss. For instance in a department store the departmental managers are held responsible for the operations of their departments, and consequently, the sales and purchases are analyzed by departments so that

departmental profit and loss can be determined. In such a business, the sales estimates and purchasing estimates are usually made separately for each department, so that the departmental analyses serve the double purpose of a check upon the efficiency of departmental heads, and as a basis for the preparation and control of the departmental estimates. In a business with branches, the responsibility for the management of each branch is imposed on the branch manager, and to determine his efficiency, an analysis of purchases, sales, and expenses by branches is necessary.

In planning the financing of a firm's operations, it is of considerable value to the financial executive to know the terms on which the estimated purchases will be made. As explained previously the terms of purchase must be taken into consideration in the preparation of the estimate of purchases. Consequently, the purchase invoices may be analyzed by terms of credit so that statistics will be available to show the purchases made on each kind of terms. This analysis can then be used in estimating the proportion of the total estimated purchases which will be made on each kind of terms during the budget period. Often this classification is not shown on the ledger accounts, but only in a supplementary record. In a large business where several analyses are to be made, it will probably be obtained by the use of tabulating equipment.

Sometimes it is desirable to know the quantity of purchases made by different buyers and the purchase invoices are analyzed accordingly. Such an analysis may be of value in assigning quotas to buyers and keeping a check on the amount purchased by different buyers or judging as to the wisdom of continuing the services of particular buyers. There may be various other

classifications such as by commodities and vendors, etc. The classification shown on the purchase budget is usually by commodities or by groups of commodities.

The unfilled purchase orders in addition to being classified according to the analysis shown on the purchases budget should be classified to show the following:

1. Month of delivery.
2. Contract orders.
3. Orders subject to cancellation.

It should be apparent that it is quite important to know the month of delivery of the goods for which orders are outstanding. Without this information, it is impossible to determine the proper delivery dates of goods still to be ordered. If orders are outstanding for goods to be delivered six months hence, this can have no effect on purchases necessary to satisfy the needs of the current month. The time of delivery is also of value to the financial executive in arranging for the payment of the goods delivered and to the operating superintendent in planning to store and handle them.

It is also important in planning future deliveries to know the amount of contract orders, the period covered thereby and the extent to which deliveries under such contracts are subject to shifting. It may be desirable to speed up deliveries or to delay them, depending on the extent to which the sales program may exceed or fail to reach the estimated program. The amount of those orders that are subject to cancellation is also quite important, especially if it becomes necessary to reduce the purchases quota because of the failure of the sales program to attain the estimated goal. In order that the amount of each class of purchase orders mentioned may be readily available, supplementary records may

be kept which classify the orders as issued and show them as filled when goods are received. But if these records are to be of the greatest service they must be accurate and to this end periodical audits should be made to test their accuracy. Oftentimes because these records are not a part of the general financial records, proper care is not given to their operation and verification.

VI

The purchases budget may be used in many ways to assist in the control of stock. If the warehousing facilities are limited, the budget by providing for uniform deliveries into stock will prevent its arrival to an amount greater than can be properly stored. It can readily be seen that, if there is no co-operation between the purchasing department and the operating or warehouse department, very undesirable situations may arise. Again, if the purchases budget is properly made and is faithfully followed, it will be possible to have a well-formulated system of reserve and forward stocks, and there will be little danger of the reserve stocks being exhausted when it is necessary to replenish the forward stock. A properly controlled buying budget will eliminate the necessity of making omissions or substitutions in filling orders. The demands of the orders are anticipated in the sales estimate and the correlated buying budget and the goods are on hand when the orders arrive. Such a budget will also eliminate the need for holding unfilled sales orders until goods are purchased with which to fill them. In short, the buying budget, like the sales budget, is one of the connecting links between the various departments and serves as a basis for co-ordination of all the activities of the business.

In the preceding pages an attempt

has been made to outline the procedure necessary for the preparation and execution of the purchases budget. In summary form, this procedure may be stated as follows:

I—Preparation of Purchases Budget

First. Preparation of a sales program. To recapitulate what has been said in a preceding article, this requires:

- (a) An analysis of the sales of preceding periods. The sales accounts should furnish this analysis. But several analyses may be of value in arriving at the final sales program, and it may be necessary to refer back to sales tickets or other vouchers for data in making this analysis. Thus if the sales accounts lead to a report of sales by lines of goods, it may be of value to refer to analyses of sales by terms, by territories, etc.
- (b) Use of sales analysis comparisons in estimating sales under existing or future trade conditions.
- (c) Comparison of estimates of sales with actual sales accounts during the period and correction of first estimate as actual sales accounts show errors of judgment in setting up the sales program. It should be noted that the sales program procedure makes use of the actual sales accounts of past periods in setting up the first estimate, and makes use of current sales accounts in correcting the sales as the period advances.

Second. An estimate of turnover for the period is made. To do this requires:

- (a) Use of inventory accounts and sales accounts of past periods in arriving at average turnover for each line of goods in comparable past periods.
- (b) Use of past average turnover in estimating probable turnover under the existing or future trade conditions.

Third. Estimated average inventory for the coming period is computed for each item or line of finished stock to be sold in the

period. For control purposes, these estimates are set up in schedules of finished stock inventory requirements. As the period advances, comparisons are made between schedules and the amounts shown by the inventory accounts, and the schedules are corrected where errors of judgment are apparent through such comparisons.

Fourth. A schedule of deliveries of finished stock is made. To be effective as a basis for management control, this schedule or estimate of deliveries should specify the amount of each line of goods that is to be placed in stock each week or each month of the period. If the period covers six months commencing on January 1, the delivery quotas may be computed as follows:

Estimated sales for the month of January at cost.

Plus inventory expected on January 31.
Less actual inventory on December 31.
Equals delivery into stock quota for the month of January.

Then for the month of February:

Estimated cost of sales for February.
Plus inventory expected on February 28.
Less estimated inventory on January 31.
Equals delivery into stock quota for month of February.

And so on for each of the six months. If the volume of sales is large and fairly constant, as in a mail order furniture line, such a monthly quota will furnish reasonably close limits on purchases. But if the volume of the sales in the line is subject to great seasonal variations, as in a department store wall-paper line, a weekly quota should be set up for deliveries into stock during rush seasons.

Fifth. An estimate of purchases which will satisfy the schedule of finished goods deliveries must be set up. This will show estimated orders to be placed each month, estimated deliveries to be made, and estimated disbursements to be made in settlement of vendors' claims.

Sixth. Approval of the schedule of finished goods deliveries and the estimate of purchases by the controlling executive authority with whom final approval rests.

II—Reports Used in Preparation and Execution of Purchases Budget

If it is assumed that the purchases budget for 1921 is under consideration, the name of each report with the money column headings of each which would be used in its preparation and execution would be as follows:

First. Weighted average of sales for three years for each class of goods:

- (a) Sales for the year 1918.
- (b) Sales for the year 1919.
- (c) Sales for the year 1920.
- (d) Arithmetical average.
- (e) Weighted average—to be used as a basis for the sales estimate.

Second. Sales program for the year 1921 for each item sold:

- (a) Weighted average for the three years preceding.
- (b) Per cent of 1921 estimated increases and decreases.
- (c) Sales estimate for 1921 on each item.

Third. Monthly report of actual sales under sales program:

- (a) Sales estimated for period to date.
- (b) Actual sales for period to date.
- (c) Per cent of increase or decrease of actual over estimated.
- (d) Add or deduct from sales program for the rest of the period.

Fourth. Estimated average inventory by classes of goods and items:

- (a) Actual sales for 1918, 1919, 1920.
- (b) Less actual gross profit for 1918, 1919, 1920.
- (c) 1918, 1919, 1920 sales at cost.
- (d) Rate of turnover on each item for 1918, 1919, 1920.
- (e) Estimated sales for 1921.
- (f) Estimated gross profit for 1921.
- (g) Estimated sales at cost for 1921.
- (h) Estimated turnover rate for 1921.
- (i) Estimated average inventory for 1921.

Fifth. Estimate of finished goods:

- (a) Month.
- (b) Estimated inventory at beginning of the month.
- (c) Estimated sales at cost.

- (d) Estimated inventory at the end of the month.
- (e) Estimated deliveries to stock during the month.
- (f) Comments.

Sixth. Estimate of purchases:

- (a) Item.
- (b) First month.
Estimated inventory at beginning of month.
Estimated deliveries to stock during the month.
Estimated orders to be placed during the month.
Estimated inventory at the end of the month.
Estimated cash disbursements for purchases made during previous months.
Estimated cash disbursements for purchases made during the current month.
- (c) Second month.
The same as for first month, and so continued for each month.

Seventh. Monthly inventory comparison report:

- (a) Estimated sales.
- (b) Actual sales.
- (c) Per cent of increase or decrease.
- (d) Estimated average inventory.
- (e) Actual inventory.
- (f) Per cent of increase or decrease.

Eighth. Monthly report on quotas:

- (a) Estimated sales for month.
- (b) Estimated gross profit.
- (c) Estimated sales at cost.
- (d) Purchase quota.
- (e) Ratio of (d) to (c).
- (f) Actual sales for month.
- (g) Revised quota, per cent shown (e) may be taken of actual sales shown in (f).
- (h) Delivered into stock during the month—taken from the purchase accounts.
- (i) Balance of quota not delivered or excess of quota delivered.
- (j) Purchase orders outstanding under quota, not delivered.
- (k) Balance in quota not ordered or excess ordered over quota.

MONEY AND PRICES

BY JOSEPH FRENCH JOHNSON*

THE Great War which began in August, 1914, between the Central Powers and the Entente in Europe affected prices in many countries in a manner illustrating most clearly some of the fundamental principles of money. All of the belligerent countries in Europe abandoned the gold standard and issued huge quantities of bank-notes and other forms of paper money. As this so-called credit money was not redeemable in gold, depreciation of the currency in varying degrees in different countries immediately took place. There was, of course, at the same time a corresponding rise of prices in different countries.

Inasmuch as the United States even after it entered the war in 1917 was able to maintain the gold standard throughout the war and thereafter, the gold value of the depreciated European currencies was accurately indicated by their foreign exchange value quoted in American dollars. The English sovereign declined from par (4.8665 cents) to 3.20 cents. In 1920 it began to recover its value and by February 14, 1921, it was worth 3.90 cents. On the same date French francs (par 19.3 cents) were worth only 7.3 cents, while the German mark (par 23.8 cents) was worth only 1.75 cents. I have not the space in this article to discuss in detail the monetary problems left as a legacy of the war to the various countries of Europe. It must suffice to point out to the reader that many European countries under the stress of the Great War furnished the economist some remarkable illustrations of the nature of fiat

money and of the perils, distress, and injustice inevitably connected with its use.

As is usually the case, government officials in Europe have been reluctant to admit that their currencies were depreciated. They have claimed, as they did in England in 1810, that gold was at an abnormal premium because of the exigencies of war; or have sought to "amuse their ignorant subjects with fantastic explanations of the perversity of the exchanges and chimerical schemes for 'correcting' them by stopping imports or borrowing still more from abroad."

It is interesting to note the comments of a distinguished English economist, Professor Edwin Cannan. In the introduction to his book "The Paper Pound of 1797-1821," published in 1919, which is a reprint and discussion of the famous Bullion Report of 1810, he says:

In the comparatively short war of 1914-18 currencies "not convertible at will into a coin which is exportable" (Report, p. 17) were issued by Governments and Government banks in amounts compared with which the 100 per cent increase in thirteen years, which made the Bullion Committee complain so vigorously in 1810, looks absolutely trifling. The British Government brought out an entirely new issue of £1 and 10s. notes and increased it to 293 millions at the date of the armistice; the Bank of France increased its issue from 6,000 million francs to 30,500 millions; the Italian increase was from 2,500 millions to over 8,000. The precise increase in Germany and Austria-Hungary is obscure but understood to have been much greater. The record since the armistice is still less of a kind to give the present day Europeans ground for

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boasting themselves better than their fathers. In twenty-three weeks the British Government had increased the note issue by 59 millions more, and the total still stood on October 1, 1919, at 335 millions. The French issue on October 2 was 36,250 millions, the Italian in July 1919 was about 10,000 millions and the Russian rouble is being manufactured in numbers which suggest astronomers' calculations rather than anything terrestrial. The result is what Horner and the Bullion Committee feared. The pound in October 1919 will buy just about the same amount of gold as it would when the Bullion Committee sat in 1810, that is, about 107 grains instead of the normal 123½, but it is respectable compared with its colleagues in Europe.

The reader must not let himself be confused by statements from official quarters, no matter how high, which are in conflict with sound economic principles. The simple fact is that paper money is not redeemable in gold and issued in quantities in excess of the amount of gold, and convertible paper normally demanded by the business of a country causes the prices of commodities to rise and becomes automatically fiat money.

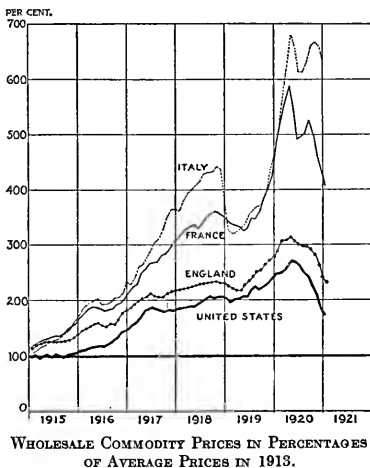
Since England's leadership in finance and London's proud position as the world's financial center cannot long be maintained unless a paper pound and a sterling bill of exchange are redeemable in gold at their face value, there is every reason to believe that the English Gov-

ernment and England's financiers will do their utmost to re-establish their monetary system fairly on the gold standard. This can be accomplished, of course, only by the retirement of a certain amount of depreciated paper money issued during and immediately after the war.

France faces a more difficult problem than England, for the franc suffered greater depreciation than the paper pound. But the French people, like the Italians, have in the past proved their ability to cope with difficult financial problems, and we may hope therefore that both France and Italy will in a few years have restored their currency to the gold basis. The almost hopeless depreciation of the German mark leads one to doubt if it

ever will be restored to its original value. It would seem more likely that the mark will be debased or that an entirely new coinage will be adopted by the German Government if any real effort is made in the future to place the German currency on the gold basis.

The chart on this page will give the reader a general idea of the course of



prices during and after the Great War in the United States, England, France, and Italy. It will be noted that changes in prices in England, although at a higher level, corresponded fairly closely with price changes in the United States. In Italy and France, on account of the

large issues of paper currency, prices rose to much greater heights than in the United States and England. The chart is reproduced from *The Monthly Review* of the Federal Reserve Bank of New York of March 1, 1921.

While the United States was able to maintain the gold standard during the war and thereafter, nevertheless its

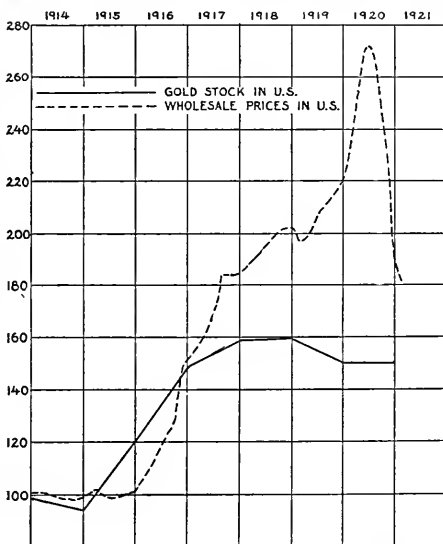
people suffered from the evils of an inflated currency, although in lesser degree than the people of other belligerent nations. During the years 1915-16 the monetary gold stock of the United States, on account of heavy imports from Europe sent in payment for exports of war supplies, increased by

about 1 billion dollars, the total amounting at the end of 1916 to nearly 3 billion dollars. This new gold found its way into the banks of the United States and became the basis for an expansion of credit and caused a remarkable rise of prices during 1916-17. The index number computed on the basis of the price of 1913 as 100 stood at 186 in July of 1917. Although the monetary stock of gold in the United States did not increase after 1917 the level of prices continued to rise until May of

1920, when the index number stood at 272. This meant of course that in that month \$2.72 would buy in the wholesale markets no more goods in general than was purchasable with \$1 in 1913.

This great rise of prices in the United States was the product of inflation quite as much as if it had been caused by an excessive issue of paper

currency. Economically the 1 billion dollars of gold which the war added to the monetary stock of the United States did not belong to us, for it had not come in response to the normal laws of trade and commerce. Since, however, it was injected into our monetary system and made the basis for a great ex-



GOLD SUPPLY AND PRICES IN UNITED STATES 1914-1921.

pansion of credit, its effect on the price level was no different from that which would have been exerted by an issue of a billion dollars of legal-tender greenbacks. We must conclude therefore that the great rise of prices in the United States from 1914-20 was the result of gold inflation. This may seem to some readers paradoxical and anomalous. Yet it is strictly true that the monetary unit of the United States was an inflated gold dollar during the war, and the probability is that it will

remain such so long as the United States retains possession of the gold it obtained in the course of the war.

This great rise of prices was attributed by many to the scarcity of goods due to the diminution of the country's productive power, while others explained it by the statement that the war had greatly increased the demand for goods and so caused the rise of prices. The average man does not understand the relation of money and credit to prices, and so lends a ready ear to the most plausible explanation that is offered. Hence when it was officially explained that the increased quantity of currency and bank credit was not the cause of high prices but rather the result, many people were inclined to accept this dictum almost as if it were self-evident. The demand for goods, it was explained, in connection with their scarcity had made prices rise, and this rise of prices had made necessary the issue of more paper currency in order that the business of the country might not suffer.

The weakness of this explanation lies in the fallacious assumption that there can be an increase in the demand for goods before there has been any increase in the supply of money and

credit. No man can buy goods unless he has money in his pocket or a bank account or credit with the seller, and he cannot get credit with the seller unless the latter believes that in due time money or its equivalent will be forthcoming.

The chart on page 479 gives the reader a graphic view of the changes in the stock of gold in the United States after 1913 until the end of 1920, the concurrent changes in the level of prices, and the great increase in the volume of the country's bank clearings, which are fair indices of the expansion of bank credit. During this period the index number of wholesale prices (the average of prices in 1913 being assumed as 100) rose from 100 to 272 in May, 1920, thereafter declining rapidly, so that the average of prices in 1920 was about 250; the total of the country's bank clearings increased at equal pace, rising from 100 in 1913 to 265 in 1920. The country's monetary stock (gold and credit money) increased in similar fashion, namely, from 3,700 million in 1913 to 8,400 million at the end of 1920, a rise from 100 to 227.

The table printed at the bottom of this page gives the figures on which Chart II is based:

YEAR	GOLD STOCK IN UNITED STATES (MILLIONS)	BANK CLEARINGS IN UNITED STATES (MILLIONS)	INDEX NUMBER OF WHOLESALE PRICES (U. S. DEPT. OF LABOR, BUREAU OF LABOR STATISTICS.)	
			Yearly Average	Highest Monthly Average
1913.....	\$1,917	\$169,811.00	100	100
1914.....	1,817	155,241.00	100	100
1915.....	2,261	187,813.00	101	101
1916.....	\$2,741	\$261,850.00	124	134 Oct.
1917.....	3,040	306,942.00	176	186 July
1918.....	3,080	332,349.00	196	207 Sept.
1919.....	\$2,833	\$417,415.00	212	238 Dec.
1920.....	2,761	451,030.00	250	272 May

The sharp upward tilt of prices in the latter part of 1919 and the first half of 1920 and the sharp decline in the latter part of 1920 require a few words of explanation; for during this period the monetary stock of gold in the United States decreased by some 300 million dollars. Why under such circumstances does the index number of prices within a year rise from 200 to 272, and then in seven months suffer an equal decline? If the reader examines Chart I on page 478 he will discover that during the same period there were similar sharp fluctuations of prices in England, France, and Italy. It is fair to assume, therefore, that common causes were at work in all these countries. In the United States we know of at least three circumstances that made for higher prices in this period, and it is quite probable that similar conditions prevailed in other countries.

1. After the armistice was signed, although there was for a time some recession of prices, in 1919 there was developed a great feeling of buoyancy and confident expectation, which led to extravagant speculation in commodities.

2. The flotation of the Victory loan in the spring of 1919 was very largely financed by an expansion of credit. The banks throughout the country loaned money most liberally against promissory notes secured by government bonds. The bulk of the subscriptions to the Liberty and Victory loans were made through banks. The subscribers paid varying percentages of cash and gave their notes for the balance. The banks, using the bonds as collateral, discounted their own notes at the federal reserve banks, where they became the basis for additional credits extended to the government. The floating of a war loan, therefore, was always accompanied by a great increase in the volume of member banks' collateral notes secured by government war obligations which were discounted by the federal reserve banks. The flotation of the Victory loan, for example, raised these discounts from 1,615 million in May, 1919, to

5,900 million in June, and to still larger sums in the five ensuing months.

3. The people of the United States, rejoicing that the war was over, tired of pinching and saving to help win the war, and longing for the luxuries and indulgences they had denied themselves during the war, began to sell their Liberty bonds and with the proceeds indulged in an extravagant orgy of buying. Many shops throughout the country freely advertised their willingness to accept Liberty bonds in payment for the goods on their shelves. The demand for goods was so eager and insistent during this period that prices rose by leaps and bounds and fortunes were made by men who had little or no experience in business.

The buying fever culminated in May, 1920, and in the ensuing months prices rapidly declined, bringing disaster to many business firms which had failed to see or guard against the peril concealed in the wild so-called "seller's market" which followed the armistice.

Wholesale prices in the United States rose and fell during 1920 as follows, the figures being the monthly average of prices as calculated by the United States Bureau of Labor Statistics, the average of prices in 1913 being taken as 100:

Jan. 248	May 272	Sept. 242
Feb. 249	June 269	Oct. 225
March 253	July 262	Nov. 207
April 265	Aug. 250	

It is not strange that business failures in the latter part of 1920 were 100 per cent greater in number and liabilities than in the corresponding period of 1919. On the contrary, it is most remarkable that the country weathered such a price cyclone without universal bankruptcy.

The average of wholesale prices for January, 1921, was 177. In view of the great increase in the country's gold stock, there was good reason for believing that the great drop of prices was nearly at an end. The country nevertheless faced difficult problems.

Many banks in the West and the South were heavily burdened with loans against agricultural produce made when prices were high. Retailers, in involuntary league, clung desperately to the high prices as the only means of avoiding bankruptcy. Labor fought hard against any reduction of its war wages. But economic laws are as resistless as the laws of nature. Readjustment, however painful, was inevitable.

The use of Liberty bonds as currency worked mischief in two ways, for it not only increased the demand and raised the prices of goods, but at the same time tended to lessen the production of goods. Shopkeepers sold the bonds which they received from their customers and thus absorbed a large amount of investment capital which might otherwise have gone into industry. The net result of the buying craze was curtailment of production, scarcity of many forms of merchandise, especially luxuries, exhaustion of the people's artificial buying power, collapse of prices, numerous business failures, cancellation of orders, increasing unemployment, and general depression.

The most encouraging feature of the present situation is the fact that the level of wholesale prices is now no higher than it was four years ago. In view of the fact that the gold supply of the country is nearly equal to that of four years ago there are good grounds for hoping that the drop of wholesale prices is now nearly over and that during the next few months a sane and normal readjustment of retail prices is certain to ensue. As the cost of living comes down, and it is now on the decline, the wages of labor will become

more reasonable and industry will revive. It is reasonable to hope that by midsummer the people of the United States will be doing business on a level of prices and hiring labor at rates of wages which will remain in force for several years to come, for the United States is now a creditor nation and will doubtless retain its present large gold stock for several years. There are no nations strong enough to draw much of it away.

It would be idle to criticize the financial conduct of the Great War on the part of any of the belligerents, but it is certainly time for thoughtful men to consider most seriously whether war must necessarily be accompanied by demoralizing changes in the price level, inflicting great hardships on innocent people long after the peace treaty has been signed. The rise of prices in the United States, as a result of the recent war, was greater and more demoralizing than the rise of prices which took place during and after the Civil War of 1860-1865. Then the advance in prices was from 100 in 1860 to 217 in 1865, whereas the rise of prices in the recent war was from 100 in 1913 to 272 in 1920.

When wars cause such changes in the price level, to say nothing of the heritage of an inflated bonded indebtedness burdening the future years, one cannot help feeling that the aftermath of war is much more grievous than need be. This is a subject most worthy of scientific attention, and the conclusion may be that a nation plunged into war ought to conscript its entire people, and not merely those who are fit for the firing line. Then the need for gigantic bond issues and for currency inflations might not arise.

DESIGNING FORMS FOR OFFICE CONTROL

BY WALLACE CLARK*

THAT engineer is considered the best designer who develops a machine that produces the best results when in use. Should not the designer of forms in an office be judged in the same way, i.e., by the results obtained when the forms are in use?

Even in those companies where the best engineering knowledge obtainable is applied to the equipment of the plant or to the line of goods manufactured or sold, it is seldom that the same grade of knowledge is applied to the drawing up of forms. This is an office problem which it is worth while to approach from an engineering point of view and is deserving of careful study, for a great part of what is called clerical work consists of entering information on forms and securing information from forms so that suitable action can be taken.

In an attempt to design forms which will give the best results when in use, it is necessary to consider how forms are used.

The number and variety of papers in the average office is so great that they are forever being sorted and resorted. Following the progress of any piece of paper through an office will show how many times it is handled with other papers or selected from them. The form should, therefore, be designed to make this sorting easy, i.e., one form should be differentiated from another by having a name printed on it, by color, size, or general appearance. Various copies of the same form are distinguished from each other by the in-

formation which is filled in on them. Blanks should, therefore, be so arranged as to place in the most convenient position, at the top of the sheet, the information used in distinguishing one sheet from another.

The designer bears in mind the necessity of arranging the form so as to make it easy to enter information on it. If possible, he locates the blanks in the same sequence as the information comes to the user. If the information comes from three separate forms, it will save time if the user can copy all the data from the first form on a limited part of the new form rather than jump from one part to another. If the words "part number" and "operation number" appear on several forms, it is obvious that if they always appear in the same sequence, there will be less liability of error in transferring information.

The convenience of the user in taking information from a form is the third consideration which the designer keeps before him. He takes pains to see that no space is provided on the form for information that cannot be used as a basis for action. The mere fact that certain data is interesting is not sufficient reason for putting it on the form.

II

When the head of an office looks at the task of designing forms from the point of view of use, he considers the steps that must be taken in order to have them drawn up in accordance with his ideas. He realizes that it is difficult to get the heads of all his departments, who draw up forms only

* Industrial Engineer, New York City. Author of "Installing Gantt Production Methods" and "Getting the Office Work Done."

occasionally, to acquire this viewpoint of use or to become proficient in the technique of drawing up forms. He usually finds that the best results can be obtained by selecting one person who is especially fitted for that work and having all new forms submitted to him before they are printed and all the old forms before they are reprinted.

Before drawing up a form or making changes in one already in use, this person familiarizes himself with the work of the department in which it is to be used. If any changes in the methods

of that department are contemplated by the management, he sees to it that this particular form is in line with these changes. If he finds that the changes in methods are not clearly worked out, he does not send the form to the printer until the methods are definitely decided upon. If a form is not absolutely necessary, he does not have it printed. He attempts to reduce the number of forms to a minimum and yet avoids making one form serve too many purposes.

When the form is drawn up, the designer submits it to the head of the department in which it is to be used, telling him why changes have been made and asking for his approval. He then secures the approval of the head of the office, if that authority has not already been delegated to him. When the copy is fully approved and is so clear that it cannot be misunderstood, it is sent to the printer.

The following instructions were written to help the man who is selected to design all the forms in an office and also to help those individuals who draw up forms only occasionally.

III

Instructions for Drawing Up Forms. Preliminary Data. Find out what

purpose the form is to serve. (If there is more than one purpose determine which is the more important.)

Make a list of the information which should appear on the

form. Determine the size of the form, taking into consideration the space required for the necessary information and in what file the form is to be placed.

If at all possible, one should stick to the following sizes:

3	x	5 inches
4	x	6 "
5	x	8 "
8½	x	11 "
11	x	17 "

The standard letter-size sheet is 8½ x 11 inches. If the form is to be typewritten and is printed with the 8½ inches horizontal, it can be used on a standard width typewriter. If it is printed with the 11 inches horizontal, it can be used only in a typewriter with a writing line 11 inches or more in length.

OFFICE		DATE	REQ NO
PLEASE FURNISH THE FOLLOWING			
QUANTITY	PART NO	PART NAME	DATE WANTED
SIGNED			
WE EXPECT TO DELIVER ABOVE ON MANUFACTURING ORDER NUMBER			
SIGNED			
REQUISITION FOR MANUFACTURE			

A TYPICAL FORM WITH BLANKS FOR SIGNATURES

A standard size for binders is that of 11 x 17 inches. This sheet can also be folded once and placed in a standard 8½ x 11 inch-file.

Files and desks are made by all manufacturers to contain papers of the above five sizes and much money and time can be saved by limiting forms to those sizes. No furniture will then need to be made to order and the files in various departments will be interchangeable.

When one has decided on the use of the form, the method of filing and the size, one is then ready to draw it up.

Place a name at the bottom of the form. Every form should have a name so that whenever it is mentioned there will be no doubt as to what form is referred to. It is difficult for anyone, except those continually using a form, to remember its number; and if there is no name on it, it is frequently referred to as "the pink sheet," "the 4x6 card," or some other name equally indefinite.

When one has become familiar with the name of a form this name has served its purpose and, therefore, should not be given a prominent place at the top but should be placed at the bottom of the form. The space at the top should be reserved for the information which distinguishes one sheet from another of the same form.

In the lower left corner write the form number, the quantity printed, and the date of printing. "G30-10M-1: 21." It is advisable to have this as inconspicuous as possible but always in the same place. The lower left corner

is generally accepted as the best location. The man who places the order for printing usually assigns the number and puts this information with instruction as to where it is to go on the copy for the printer.

At the top of the form space should be provided for the information by which the forms will be sorted or filed. If this information is a number, symbol, or date, place it in the upper right corner; if the name or description of an article, place it in the upper left corner. Numbers and symbols are usually of uniform length and can be placed in a small space at the right. Names and descriptions vary in length and it is, therefore, necessary to allow as much space as can be spared, beginning at the left.

Horizontal lines should be used

whenever it is desired to carry the eye across the sheet, or to emphasize the fact that a blank must be filled in. If the form is to be filled in by hand, lines should be used throughout.

If forms are to be filled in on a typewriter, they should usually be arranged for pica or larger type. Smaller type is too difficult to read, particularly in a

2042	Foundry Order		○	Casting Record	
	CASTING NO. _____			NO. WANTED _____	
	NAME _____				
	ISSUED _____			CLASS FN _____	
COMPLETED _____			MATERIAL _____		

FOUNDRY ORDER BEFORE REVISION

NO. OF PIECES	DATE	ORDER NO. 2042
NAME		
MATERIAL		DRAWING NO.
FOUNDRY ORDER		

FOUNDRY ORDER AFTER REVISION

manufacturing plant. Typewriter spacing is also the best for handwriting.

Lay off all horizontal lines by typewriter spacing, i.e., three spaces to the inch, beginning at the top of the form. If the form is properly trimmed and the top edge is calculated according to typewriter spacing from the first printed line, it can be inserted in the typewriter and the cylinder turned to bring it to any line without adjustment by means of the variable line-spacer.

Perpendicular lines should also be according to typewriter spacing, i.e., beginning at the left margin each perpendicular line should be so placed that depressing the space bar will make the carriage jump over that line.

A simple way to lay out both horizontal and perpendicular lines is to place a blank sheet of paper in the typewriter and insert a horizontal line and a perpendicular line of periods. Lay this paper on the form being made up and indicate where the lines should be drawn; each line should fall on a period.

Instructions should be printed on the various copies, usually in the lower left corner.

Divide Order Forms into three parts:

1. At the top of the sheet place whatever information is needed to identify that order; for instance, customer's name, address, order number, and requisition number.

2. At the bottom of the sheet provide space for whatever instructions may be necessary for packing, shipping, and billing.

3. In the body of the form provide space for the items wanted with the necessary specifications; quantities, prices, and deliveries. A column for "Quantities" should follow "Items" so that whoever uses the form will know what is wanted before he knows how many. The nearer the quantities are placed to the prices, the fewer errors there will be in extensions.

The reason for dividing an Order Form into these three parts is that it makes it easier for the shipping department to get these instructions without going all through the form. The manufacturing, purchasing, or store-keeping department gets its information from the body of the form and

6 PT. 521	NO. 1	GOTHIC TYPE FOR FORMS
6 PT. 522	NO. 2	GOTHIC TYPE FOR FORMS
6 PT. 523	NO. 3	GOTHIC TYPE FOR FORMS
6 PT. 524	NO. 4	GOTHIC TYPE FOR FORMS
8 PT. 525	NO. 5	GOTHIC TYPE FOR FORMS
8 PT. 526	NO. 6	GOTHIC TYPE FOR FORMS
10 PT. 520	NO. 7	GOTHIC TYPE FOR FORMS
12 PT. 545	NO. 8	GOTHIC TYPE FOR FORMS

3. SAMPLES OF GOTHIC TYPE

Blanks for signatures are usually placed in the lower right corner of a form. If the signature applies only to a part of the form, that part should be clearly separated from the remainder of the form and the signature-blank placed in the lower right corner of that part.

If the various copies of a form are to be dispatched to different places, in-

need pay no attention to the shipping instructions. The data which identifies the order is at the top and is used by all departments.

Whenever space needs to be allowed for checking, provide for straight line checks rather than ticks. Columns for checking should be as close as possible to the figures.

The form when drawn up, should be

properly approved before sending to the printer, because changes made after the proof is submitted will be charged for by the printer.

IV

Care should be taken to see that the copy which is to be given the printer is complete and accurate.

Make out a requisition covering the following points:

1. Form name
2. Form number
3. Size
4. Paper
 - (a) Grade
 - (b) Weight
 - (c) Color
5. Lines printed or ruled
6. Type
7. Ink
8. Printed on one or both sides

9. Punched, scored, or perforated
10. Collation
11. Padded
12. Packed
13. Submit proof and sample of stock
14. Quantity wanted
15. Date wanted
16. Estimated annual usage

The explanation is as follows:

1. Form name
Letters and telephone conversations regarding the form will refer to the name.
2. Form number
Records in the purchasing, receiving, and storekeeping departments will be kept by form number.
3. Size
Give the smaller figure first, i.e., 4 x 6.

RET'D ISS'D				ORDER NO.	
NAME'S NAME				DEPT.	NAME'S NO.
		TIME	FINAL OPER		
			ALL ON THIS OPER FIN		
		RATE	ALL ON THIS OPER N F		
			TRANSFERRED		
		WAGES	BREAKDOWN		
			CAUGHT UP		
NACH. NO.		RATE	EXPENSE		
NAME OF PART OR JOB			PART NO.		
OPERATION NAME		OPER. NO.	PCR FIN ON THIS OPER.	RATE	WAGES
ENTERED		COUNT CORRECT	QUALITY CORRECT		
P & C SHEET	PAY SHEET	SHOP ORDER			
PRODUCTION CARD					

[illegible]

TWO FORMS SERVING THE SAME PURPOSE BUT SHOWING DIFFERENT METHODS OF DESIGN

(c) Color

Avoid elaborate color schemes as they are confusing and expensive. If there are more than three copies of a form, distinguish by printed numbers rather than by colors.

If the form is to be blue-printed, use bond paper without any water-mark, as the water-mark will show almost as plainly as the other information on the sheet. Use twelve or thirteen pound paper, as thinner paper will wrinkle too easily, and the heavier the paper, the longer it takes to make a blue-print.

5. Lines printed or ruled

It is usually cheaper to print lines than to rule them, especially in large quantities, for the forms must be run through the press to print the type and the lines can be printed at the same time. If lines are ruled, forms must be run through the ruling machines in one or more directions and in one or more colors after the type is printed.

All the effects gained by lines ruled in colors can be secured by the use of printed lines of varying weights or by double lines.

A disadvantage of ruled forms is that corrections cannot easily be brought in after the form has been set up. Rulers often refuse to show proof of forms containing horizontal and vertical rules as correction of such forms might necessitate resetting of the ruling pens throughout the entire form.

• Type

Use Gothic type on all forms. This is a font which is kept by all good printers. It is easily read and looks more business-like than other fonts. If Gothic type is used on all forms, they will be uniform and distinctive.

Due to the fact that all lines are of even width, Gothic is the only type which blue-prints or photographs satisfactorily. The light lines in Caslon, for instance, disappear entirely when blue-printed.

7. Ink

Use black ink for type and for lines.

8. Printed on one or both sides

Make it clear to the printer whether the form is to be printed on one or both sides.

In case of a card where the information is intended to be carried over from the front to the back, it should be "tumbled," i.e., print the back so that when you turn the bottom up the back of the card will be right side up. In other words, turn the card the same way you would turn an American coin in order to get the back of it right side up.

9. Punched, scored, or perforated

Give size of holes and distances on centers.

10. Collation, i.e., duplicate, triplicate, etc.

Indicate how the forms are to be sorted, for instance, in duplicate, first copy pink, second copy blue, or in sets of five, numbered 1, 2, 3, 4, and 5.

11. Padded

Indicate whether or not forms are to be padded and the number of forms or sets in a pad.

12. Packed

It is necessary to make the counting of forms easy for the receiving clerk and the keeper of the stockroom, and therefore it is advisable to get the printer to wrap forms in packages of uniform size with a sample form on the outside of each.

13. Submit proof and sample of stock

If you do not specify this on your requisition, the printer is likely to go ahead with type or paper which you would not consider satisfactory.

14. Quantity wanted

When a form is printed for the first time or an important change is made in an old form, do not print more than one month's supply, so that if the need for changes becomes apparent when they are actually used, it will not be necessary to wait very long until these changes can be made. When the form has proved itself satisfactory, it is possible to order a larger quantity, i.e., from six to eight months' supply, but never more than that. Savings made through printing large quantities are usually nullified by having to destroy out-of-date forms.

15. Date wanted

Give the printer as much time as possible, but always state a definite date.

16. Estimated annual usage

This applies to new forms only. Give your best estimate as to the quantity that will be used in a year so that the stockkeeper can base his "order point" and "quantity to order" on your estimate.

V

If the orders for forms are placed with the printer by the purchasing department, they should be followed up for delivery by that department. Printers will pay more attention to a follow-up from the department which has the authority to place future orders because they realize that orders are likely to be sent to the printer who gives the best service. In the printing business, service and quality count for more than price.

One of the most effective means for reducing the cost of clerical work in an office is through the designing of forms

used. The head of an office who appreciates this fact has his forms so drawn up as to save time and increase accuracy in sorting, in entering information, and in taking off information. He trains one person in the best methods of designing forms; he sees that changes are in accordance with the plans for the future development of his office; he makes sure that the head of the department which is to use the forms is satisfied with them; he does not print forms which are not absolutely necessary; he limits forms to five sizes; he places a name and a number on every form; he arranges all forms for type-writer spacing; he uses printed lines whenever possible and Gothic type always; his instructions to the printer are so complete and clear that they cannot be misunderstood.

The time saved and the accuracy in the office will be in direct proportion to the care and knowledge devoted by the management to the drawing up of forms.

WHY NOT A SALES TAX?

BY WALTER A. STAUB*

EVER since man has been living in communities with some form of government, taxation has been a live subject of discussion. The World War with its unprecedented expenditure of life and treasure brought, and has left with us, so many problems of an apparently almost insoluble character or of such stupendous size that it is not surprising to find our tax situation in this country offering difficulties which seem almost impossible of satisfactory solution. Heroic measures were resorted to during the war to raise the enormous amounts of revenue which were indispensable to carry on the tremendous struggle.

When it is realized that immediately prior to the armistice the United States was expending as much every sixty days as the North spent during the whole four years of the Civil War, that in an hour's artillery fire in France more ammunition by far would be fired than was used by both sides in the entire three days battle at Gettysburg, and that all these things have to be paid for in some way or other, some slight conception is gained of the staggering financial problems which the war created. Never before has a war been to so large an extent, a matter of organization and of industry and support at home. The tremendous expenditures which were thus occasioned could be financed in only three ways:

1. Loans
 2. Issue of paper money
 3. Levy of taxes
- A number of reasons could readily

be given why so considerable a part of the expenditure was financed by levying taxes of unexampled severity in both Great Britain and the United States. The excess profits tax, for which we were indebted to the ingenuity and resourcefulness of the British, was imposed from mixed motives. While on the one hand it was the backbone of war taxes, and in fact was indispensable to the carrying on of the war, it was imposed perhaps just as much in the first instance to satisfy British labor, which British statesmen feared would not continue to support the war if capital appeared to be unduly profiting thereby. With all the defects of the war and excess profits taxes, and those who advocated them appear to concede the presence of many defects about as readily as those who may have unwillingly accepted the taxes, it was fortunate for the Anglo-Saxon nations that so considerable a part of our war expenditure was defrayed from taxes instead of through still more loans or by a resort to an inflated currency.

II

The relatively strong financial position of the United States and Great Britain today is due in no small measure to the courageous manner in which so considerable a portion of the current income of the people in each country was applied to the payment of war expenditures instead of deferring the evil day of settlement as long as possible through still greater loans and the unlimited issue of paper currency. The financial position of Germany today would be much stronger, if, instead of

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relying on the indemnity she expected to collect from the defeated Allies and levying taxes to only a moderate extent, she had laid taxes on war profits in the same measure that was done in Great Britain and America. France, too, failed to levy taxes to the same courageous extent that Britain did, though an extenuating circumstance not to be overlooked is that the defaulting by Russia of the interest on her bonds, which were so largely held in France, made tremendous inroads on the income of France and greatly impaired the taxpaying ability of her citizens.

Sad to say, many of the burdens imposed by the war will be with us for years and years to come. The signing of the armistice did not bring to an end the need for further large expenditures of money by the various governments. In our own country the war debt created in less than two years time now calls for an annual expenditure of interest (without allowing for any offset of interest to be collected from loans to our allies, the payment of which cannot safely be relied upon for at least some time to come) equaling what before the war was considered a huge national budget, that is, approximately \$1,000,000,000. The billion-dollar pre-war budget included not only the expenditures of non-revenue producing departments of the national government, but also for the post-office and for much "pork" for all kinds of river and harbor improvements, post-office buildings, and similar public works which congressmen love to secure for their home districts. Not only do we have the additional annual burden of war loan interest on top of the pre-war government expenditures, but the current expenditures of the government for non-war purposes have not yet been reduced to a pre-war basis. Also, the "mopping up" expenditures following the

war, i.e., settlement for canceled contracts and war claims of all kinds, shipping board losses, etc., will probably continue in considerable amounts for some time to come.

III

The large national expenditures, including a floating debt which is hanging over our heads and which there seems to be a fear of attempting to fund, call for national revenues for the next several years, so the Secretary of the Treasury calculates for us, of approximately \$4,000,000,000 per annum. This is about four times the largest pre-war budget, which as already stated had included such expenditures as those for the post-office which brought in a considerable revenue. The \$3,000,000,000 more which we shall need to pay out for each of the next few years, in addition to the pre-war budget, will bring in but little income to offset expenditures. The only offset will be the reduction in interest charges due to paying off the floating debt and such part of the Victory notes as may be redeemed and not funded at maturity in 1923.

When one looks at this tremendous amount to be raised and thinks of the heavy taxes that, no matter what their form, must be laid, one yearns for those days when the corporation income tax was one per cent (we smile now when we think of how oppressive a tax of \$50,000 on a \$5,000,000 corporate income seemed in 1909) or for those modest and retiring surtax rates which under the 1913 law went only as high as six per cent on individual incomes of \$500,000 and over.

It did not take long to realize that, even though the war was over, heavy tax burdens would continue for a long time. Also, when the attack on the excess profits tax as being un-American,

undemocratic, and tending to discourage business initiative grew strong, it was seen that before this tax could be abandoned it would be necessary for Congress to see some other way in sight by which the revenue necessary could be secured. Consequently, those who were eager to eliminate the excess profits tax, and at least to reduce very substantially the surtaxes on individual incomes, soon realized that such proposals would be considered only academic and would receive but little serious attention unless they were accompanied by practical suggestions for other means of raising the needed revenue.

IV

Of all the proposals which have thus far been made for replacing the revenue which will be lost by abolishing the excess profits tax and reducing the higher surtaxes, or by such sources of revenue drying up, the proposal for a sales tax has been pushed with the greatest vigor and supported by more energetic and extensive propaganda than any other.

The sales tax as pictured by those convinced of its practicability is most alluring. In effect we are told, on the one hand, that it is so simple that no one will have the slightest difficulty in making up his monthly sales tax return in a few odd moments one evening a month, that the tax will produce billions of national revenue, and that (Oh, joyful thought!) every penny of the tax will be passed on to the ultimate consumer, that elusive character who seems to be in a class with the missing link. On the other hand, we are led to believe that, even though the ultimate consumer is handed for payment as a part of his grocery, butcher, and haberdashery bills, such a small amount of tax thereon as anywhere from one to six billion dollars, the tax will spread out so thinly over our large population

that nobody will feel it and that the difference in the family exchequer will not be any more noticeable than if a few more dimes and quarters had been spent for amusement this week and last.

All jesting aside, if it were possible to institute a sales tax which would accomplish only fifty per cent of what is claimed for it, it would be a wonderful source of revenue. Unfortunately, the very ease with which it is claimed such a tax could be levied, would be a temptation, when the insistent need for large revenues has somewhat abated, for the raising of public funds in unnecessarily large amounts. Such funds would be in danger of being squandered for non-essential public purposes as is so often the case when a government has more liquid funds than it really needs.

The purpose of this article is to examine briefly the claims which have been made for the sales tax, and to discuss them in the light of those difficulties which it has been pointed out would be likely to be encountered in attempting to institute and administer such a tax.

Before proceeding to the consideration of the matter in detail it is to be pointed out that several different kinds of sales tax have been advocated. There is the general turnover tax which proposes to levy a tax of say, not over one per cent, on absolutely all sales or turnovers including not only commodities or merchandise in every form but also capital transactions, such as sales of real estate and securities, services such as those rendered by lawyers, architects, and other professional men, and rents and interest. In sharp contrast to the general turnover tax is the retail sales tax which proposes to levy a tax of say one per cent (presumably, however, the rate would have to be higher if anything like the same

amount of income is to be secured as under the general turnover tax) on those sales which are made to the ultimate consumer, in other words retail sales.

Between these two plans is still another which would lay a tax on all sales excepting those which represent turnovers of capital or which are service earnings rather than sales of merchandise.

V

The principal arguments urged in support of the plan for some one of the three forms of sales tax mentioned above have already been alluded to. They are briefly:

1. That the tax would be extremely simple of calculation and of collection.
2. That the tax would not be a burden to business as, being at a uniform rate on all sales, it would be passed on to the purchaser, either as a specific item or as a part of the sales price.
3. That the tax would be so small that it would not be felt by those who eventually have to pay it, namely, the ultimate consumers.

Other arguments for the enactment of a sales tax are really only variations of these three.

Let us now hear from those who have wondered why such a perfect tax has not long since been discovered and adopted by all progressive nations and who feel certain that there are fallacies in the arguments which have made this tax so alluring.

For purposes of discussion, simplicity of calculation may for the moment be conceded for the general turnover tax. The moment, however, we depart from a tax which is imposed upon absolutely every turnover of every description, difficulties of calculation involving construction and interpretation of the law will surely arise just as much as, and perhaps even more than, has been the

case under our excess profits tax acts and even under the relatively simple income tax laws. The difficulties involved in determining, in the case of the retail sales tax, which sales are to ultimate consumers and which are to others and, therefore, not subject to tax, can easily be imagined. The opportunity for evasion would in all probability be greater under a retail sales tax than is the case at present with reference to income taxes. In principle it is a simple thing to record sales. Yet it is an astonishing fact that many business concerns and particularly the individual retail merchant have very defective sales records. Those who have struggled with the analysis of an old-fashioned merchandise account in which all possible varieties of transaction, debit and credit, have been intermingled, may have some conception of the difficulties of calculation and administration where each sale is to be allocated to either one of two groups: one, the goats, those to the ultimate consumer on which the tax is to be paid, and the other the sheep, those which are not responsible for imposing a burden on either buyer or seller in the way of sales tax.

What might be termed the merchandise turnover tax, that is the tax on all turnovers of merchandise, excluding capital transactions and charges for services, would also develop difficulties of calculation and administration. Just where to draw the line between the sales subject to the tax and those not subject thereto because of being one of the excluded classes would develop perhaps as many perplexities as have resulted from the attempt to make invested capital a base for profits taxes. Where would the line be drawn? For instance, what would be done about exchanges of property or exchanges of merchandise? How about sales of machinery or other articles which may represent mer-

chandise or income-producing sales to the seller but which represent a capital investment by the purchaser?

Even the general turnover tax, with all its apparent simplicity, would offer difficulties not to be lightly brushed aside. There would almost certainly be exemptions created sooner or later for certain classes of sales or turnovers and, with any exceptions whatever, difficulties of classification of sales would at once arise.

VI

Difficulties of administration would arise through the incentive to arrange transfers of property and merchandise in such a way that actual sales would be avoided or deferred. For instance, leasing and consignment arrangements would probably be widely resorted to. Such arrangements in place of the outright sale of goods to distributors would not be a wholesome development in the business world. Also, it would tend to increase unnecessarily the difficulties of those with only a moderate capital, sufficient for their business under present methods of distribution but inadequate for carrying goods on a consignment or lease basis until disposed of by the distributor to the retailer. Competition would tend to drive businesses generally into such arrangements to a considerable extent.

Assistant Secretary of the Treasury Leffingwell is quoted as having said that a turnover tax would in five years revolutionize present methods of doing business, because means of getting around the intermediate turnover tax would be devised and put into effect. Changes in business methods should, however, come as a result of economic improvements and increased efficiency, not as the result of a desire to avoid a tax imposed on business and tending to hamper it.

Difficulties which would be especially encountered in the administration of a retail sales tax are forcefully pointed out in the following extract from the recent report¹ of the Tax Committee of the National Industrial Conference Board:

A great difficulty is the determination of when a sale is a sale for consumption or for use. Sugar sold to a householder is probably for final consumption, but sugar sold to a candy manufacturer is part of his raw material. An automobile tire sold to an owner is for final use, but it could not properly be so considered when sold to an automobile manufacturer, in which case its full cost would again be taxed upon the sale of the completed car. Coal sold to a householder is probably for final consumption, but where would the line be drawn in case it is sold:

1. To a gas company for making gas?
2. To a steel company for making its own gas fuel?
3. To a power plant for generating power for sale?
4. To an electric railway?
5. To a manufacturer for making his own power?

If these are considered cases of final consumption or use, this tax becomes practically a turnover tax with all the added objections and inequities which would very possibly arise from its more or less hit-or-miss application to many but not to all turnovers. If they are not so considered, then an elaborate system must be devised to establish the use to which the coal is put in order to secure exemption from the tax. The number of commodities with respect to which a similar situation would arise is inexhaustible, and their very multiplicity presents a difficulty which is practically decisive.

VII

The questions which have been raised, as to whether in fact the calculation and collection of the tax would prove to be as simple as proponents of the sales tax believe, are not as serious as those which relate to the burden on

¹ Special Report No. 18, December, 1920.

business or the possible unfair distribution of the tax among the people who will eventually pay it.

Students of taxation and those who have had wide opportunity for observation of the working of taxes in practice have challenged very sharply the claims that the imposition of a uniform rate of tax would be absolutely fair as between one industry and another, and that in any event the tax could not be burdensome to business as it would be shifted to the consumer and none of it would thus be borne by business as such. The first proposition involves the second because, if the tax would invariably be shifted, it would make but little ultimate difference to business how much the tax was, excepting for the temporary inconvenience perhaps, of having to pay over the tax from month to month while part of it was still in the form of accounts receivable yet to be collected from customers.

That the shifting of the tax would not be the simple matter which has been assumed by its proponents seems to be quite evident upon consideration of a few every-day facts. It would be natural to assume that every expense incurred by a manufacturing or mercantile business would in due course be shifted to the purchasers of its products or merchandise. Surely no manufacturer or merchant wants to absorb any expenses which are incurred in the manufacture or sale of goods and yet in practice this is exactly what does happen to many concerns.

Figures recently published by the Commissioner of Internal Revenue show that during 1918, a year of wonderful business prosperity, more than one-third of the corporations in the United States made no profits whatever. Those corporations which did report profits showed great variations in the amounts realized. Not only was there variation between industries,

but individual corporations in the same industry showed a great difference in profits realized. If in a sellers' market, when prosperity was enjoyed by many concerns which for years before the war had not earned a fair return on the capital invested in them and when corporations were supposed to have passed on the excess profits tax to their customers time and time again, over one-third of the corporations of the country earned no profit at all, is it reasonable to suppose that under competitive conditions (to which we are rapidly returning, if in fact we have not already arrived), every business concern will invariably succeed in passing on the sales tax to its customers, and this neither more nor less than the amount of the tax paid by it to the government?

How would public utilities whose rates are regulated by law pass on the tax? Or even if a street railway, which charges anywhere from five to ten cents per ride, is authorized to pass on the tax, how is it to do so in practice? On a five-cent fare the tax would be only $5/100$ of a cent; if a full cent additional is collected, the tax is being passed on twenty fold, whereas if it is not passed on because of its trifling amount in the case of the individual fare, it would aggregate a large amount in the total gross earnings and impose a heavy charge on the net profits.

In an editorial in the *New York Times* of February 5, entitled, "The Profits Tax Must Go," appeared the following statement:

A flagrant instance of the vicious character of the tax imposed upon corporations in this country is disclosed in the annual statement of Montgomery Ward & Co. of Chicago. With net sales in 1920 amounting to \$101,745,270, the company shows losses of \$7,855,278, including depreciation. Yet during this year of loss the Federal Government took from the company \$860,326 in taxes upon business of the year 1919.

The writer of the editorial apparently overlooked the fact that with a one per cent sales tax in force the company would not have paid \$860,326 of profits and income taxes upon the profitable business of the preceding year, but a \$1,017,452 tax on the sales of the current year. Also, he overlooked the fact that had the year 1919 not been a profitable one for the company, it would not have had to pay excess profits and income tax, whereas the sales tax, had one been in force, would have had to be paid regardless of whether the year's business resulted in a gain or in a loss.

If the reply were made that had the sales tax been in force it would have been passed on to the company's customers, the question may well be asked, Why was not the loss of \$7,855,-278 passed on? The same circumstances which caused this company to lose money on its 1920 business would in all probability have caused it to forego, whether it wanted to or not, the passing on of the sales tax to its customers.

VIII

If the sales tax cannot be invariably shifted in its entirety it becomes a tax on gross earnings and would in very many businesses be far more burdensome than the excess profits tax has been. Many businesses, particularly in lines handling staple commodities such as meats, groceries, dry-goods, hardware, and the like, are conducted on very small margins of profits. The published reports of Swift and Company, the meat packers, show that during the ten years from 1911 to 1920 the highest net profit per annum on sales was 3.96 per cent in 1917 and the lowest .44 per cent (less than 1 per cent) in 1920. Before the war there were many mercantile businesses which were thought to be doing very well indeed if

they cleared net from two to three per cent on their gross sales for the year. A uniform rate of tax for all businesses regardless of the fact that some are conducted on a margin as low as that mentioned, while in some other lines, such as special manufacturing or the like, the rate of net profit may even in normal times be from ten to fifteen per cent of the sales, shows how unfair a uniform rate of tax would be.

The continued emphasis on the low rate of a sales tax is likely to mislead one who does not give the matter very thorough consideration. It must continually be borne in mind that the tax is on gross business and not on net profits. Hence, the tax while expressed in a small rate may nevertheless amount to a large percentage of the net profits, especially in the case of those businesses having a large turnover with a small margin of profit. Rain descends in the form of drops of water, each drop small in itself, but when there are enough of them a cloudburst is the result.

Aside from the injustice of imposing a uniform rate of sales tax on all businesses, regardless of the fact that some industries yield a much larger return per dollar of turnover than others, another discriminatory result appears because of the greater number of processes or operations performed by one business as compared with another. This question was thoroughly considered by the Tax Committee of the National Industrial Conference Board and was made the subject of the following illuminating comment in the Committee's report:²

If a 1% turnover tax were imposed upon each step in the cotton industry it would fall upon the following sales:

1. Raw cotton to ginning mill
2. Ginner to spinner
3. Spinner to mercerizer

²Special Report No. 18, December, 1920.

4. Mercerizer to dyer
5. Dyer to weaver
6. Weaver to finisher
7. Finished cloth through agent to wholesaler
8. Wholesaler to retailer

There are many textile plants which buy the cotton from the ginning mill and sell the finished cloth through their own selling organization to the wholesaler and retailer, thereby eliminating one-half of these steps. It is claimed that the advantage which the large mill carrying on several consecutive steps would have over its smaller competitors, is small compared to the advantage which it now has through the profits made from each process. Such a contention ignores the fact that profit should be measured as a percentage on the business investment, and that a business concentrating on one process and investing all its money in that one process may earn as large a return on its capital as the competitor who spreads his capital over several processes, and should, to be equally successful, earn as much profit on each process as competitors carrying on separate processes. Single-process businesses are therefore able to compete successfully with those which carry on multiple processes. A turnover tax would discriminate against them. Regardless of whether the advantage which such a tax would give to the self-contained operator is large or small, it is questionable whether the Government should levy a tax that would have even a tendency to drive smaller enterprises out of business.

A second illustration applies to the shoe industry. In cases where each operation is carried on separately, a turnover tax would be levied on the sales of

1. Hides to tanner
2. Tanner to leather merchant
3. Leather merchant to shoe manufacturer
4. Shoe manufacturer to jobber
5. Jobber to retailer
6. Retailer to consumer

At least one large shoe manufacturer tans his own hides and sells the finished shoes through his own chain of retail stores to the consumer. It has been estimated by one of the prominent advocates of the sales

tax that in this case the cumulative tax saved by the large shoe manufacturer would be approximately 3%. This is undoubtedly an underestimate, but the Committee is informed that 3% on their gross sales is as much as the average net profits of some leading shoe manufacturers in pre-war times, as shown by the published reports of their earnings.

A third illustration is offered by following the course of any common tool, such as a shovel, pick or axe, through the two extremes of the greatest compared to the least number of turnovers. In the one case the tax would be paid on the sale of

1. Iron ore, limestone and coke to make pig iron
2. Pig iron and coke to make steel ingots or billets
3. Steel ingots or billets sold to rolling mill to make bar steel
4. Bar steel sold to tool manufacturer
5. Tool sold to wholesale dealer (the customary practice)
6. Tool sold to retailer
7. Tool sold to consumer

If a certain well-known corporation which combines all the steps from ore to bar steel furnished the steel to the tool manufacturer and he sold it to one of the large mail-order houses, there would be only the tax on the sale of the bar steel, on the sale to the mail-order house, and on the sale to the consumer. It may be claimed that the first three taxes are so small a proportion of the cost of the tool that their elimination would make little difference. It must be borne in mind, however, that this same elimination would occur in many of the other items of cost in the manufacture of the tool. It would apply to the manufacture of the handle. One manufacturer might make the handle from his own timber, cut and shipped by his own men, and another might have to buy handles made from timber bought from timber owners, cut and shipped by handle blank makers, and turned into handles by a handle maker, thereby paying three taxes. It would apply to coal for power, which in one case might be shipped directly from the mine and in another case pass from the mine owner to the commission merchant, to the

coal dealer, to the manufacturer. It would apply to the belting to drive the machinery, to the machinery itself when purchased, and to the countless supplies used to operate the factory. The elimination of any of the processes of distribution would, of course, eliminate the tax on substantially the total cost of the tool. Average records in the hardware business show that the wholesaler who distributes such tools does not in normal times realize net profits of more than about $2\frac{1}{2}\%$ of his gross sales, so that the elimination of this one tax through sales directly to a retailer would be equivalent to about 40% of the net income derived from such sales by a wholesaler. How could such a tax be shifted in competition with those who do not pay the tax? Supposing that a general sales tax would be figured by every business as an item of cost, can it be assumed that certain businesses would be able to shift a tax which their competitors did not have to pay?"

IX

Even if it were generally conceded that the tax can be passed on to the consumer in its entirety, that it will, therefore, not be burdensome to business, and that the rate, even though uniform for all lines of businesses, is not material, the serious question still remains whether the tax, when it is eventually paid by the consumer, results in a just distribution of the country's tax burden. This is the viewpoint from which perhaps the most serious attack has been made on any form of general sales tax. One of the fundamentals of wise taxation which has become increasingly recognized from the days of Adam Smith down is that a tax should be levied according to ability to pay. So long as in the apportionment of the country's produce—the result of productive effort—we make a discriminating distribution, i.e., a larger portion to him who renders the larger service, or in other words, reward according to ability to earn or

serve, we must expect to apportion the fiscal burdens of the country in like manner, i.e., according to ability to pay.

A tax on consumption does not fall according to ability to pay but in reality is laid according to one's needs. The mere fact that within certain limits one may increase or decrease his consumption does not really alter the situation. The great majority of the population of any country are people who with their best efforts earn but a modest income and are bound by circumstances to disburse the major portion of it as fast as earned for necessary living expenses. To be sure, during the war certain classes of workers enjoyed most unusual prosperity and spent their earnings, many of them, in an unusually extravagant manner. Opportunity for repeating the performance has disappeared for most of them and present business conditions give no hint of a recurrence in the near future.

Assuming that wages have returned, as they are now in the process of doing, to a normal basis and that, saying nothing of workers who are out of employment, the worker is earning but little more than sufficient to maintain himself and his family, what is the effect of levying a sales tax which would produce say \$2,000,000,000 annually? There are about 100,000,000 people, including men, women, and children, in the United States and this amount of tax would mean about \$20 per capita. If the tax is to fall on consumption, that is, on needs rather than on ability to pay as indicated by income, why not save all the trouble of passing the tax through the myriad channels of hundreds of thousands of business enterprises and levy it directly on every man, woman and child in the United States? In other words, levy a poll tax of \$20 per capita. This would mean that the workman having a family consisting of wife and three children

(the average family in the United States is usually considered to consist of five persons, though the number averages probably higher among the poorer classes and lower among the well-to-do) would have to pay \$100 poll taxes for the family.

When it is remembered that before the war the average annual income of a worker in the United States was not over \$700—it was usually stated at a somewhat lower figure—and that even with the high cost of living during recent years it did not rise to more than \$1,300, if that much, the hopelessness, not to mention the injustice, of attempting to collect such a tax from the working class is obvious. Of course, the consumption expenditures of the well-to-do average somewhat more per capita than is the case among the wage-earners, but it is not likely that they would average enough higher to reduce the per capita out of a \$2,000,000,000 sales tax to lower than \$17 or \$18 for the working classes. It is not to be overlooked that the living expenses of well-to-do people include items which would not be subject to the sales tax, such as wages of servants; while presumably but little which the wage-earner purchases would escape the tax.

X

E. R. A. Seligman, who is perhaps the greatest authority on taxation in this country today, makes the following significant comment on this subject:

The proposition now is to take off one of those three chief categories—the tax on excess profits—and remove the burden from profits on wealth or income, and put it on the other or consumption side. This would, in my opinion, unduly shift the balance and bring us too near the position formerly occupied by all the aristocracies of old, and still reflected in some of the European countries. . . . Why is it that England and America show their democracy,

their real democracy, so much more than countries in the difficult position of Italy, or France, or Germany? There you will find throughout the war, and even now, the great mass of taxes imposed upon the consumption of the common man; whereas in England and in the United States during the Great War, as over against our experiences in the Civil War, the great majority of taxes are raised from wealth; that is, from those who can afford to pay, rather than from the consumption of the necessities and comforts of life. . . . After the United States, the two countries of the world which are making the most progress in fiscal reform are England and Italy—for Italy is doing better than France. When these two countries came to consider this problem they went into the question of a sales tax thoroughly and finally rejected it. On the other hand, the two big countries of the world that have adopted the sales tax, Germany and France, did so only as a last resort, after exhausting every other available source of taxation. . . . Germany was forced to this sales tax in the last extremity, and in France the same is true. . . .

A sales tax on the sales of capital would ruin New York City as the financial center of the country. A sales tax on the necessities of life would evoke a political struggle the like of which we have never seen in this country.

The sales tax represents an attempt to put an undue, an extravagant burden upon the consumer, instead of on the producer or the possessor of wealth.³

XI

Prof. Seligman's reference to the history of sales taxation directs attention to the statements made by its proponents that the sales tax—presumably of the same general nature as that proposed for adoption in this country—is in successful use in the Philippines, Mexico, Canada, and France. The facts, as far as the writer has been able

³ Extracts from statements to the Tax Committee of the National Industrial Conference Board.

to ascertain them, appear to be about as follows:

Philippine Islands. A former collector of internal revenue in the Islands who lays claim to having drawn the plan for the sales tax in force there, attracted considerable attention by an address on the subject recently delivered before the Chamber of Commerce of the State of New York. He stated that the tax is being successfully administered, is the biggest revenue producing factor in the Islands and that it is satisfactory to taxpayers.

For several reasons, however, the sales tax in the Philippines—even if it be granted that it is all its originator claims for it, though there are not lacking former residents of the Islands who do not concede all that is claimed for it—is of little help in indicating what the experience with a general sales tax in the United States would be. In the first place, there is comparatively little manufacturing in the Philippines; the industries are principally of an agricultural character and the other business is of that mercantile character which is naturally affiliated with agricultural pursuits. In the United States, on the other hand, manufacturing through many operations, starting from the raw materials and progressing to highly refined products, forms an enormous volume of the country's industry. It follows that, under the simple kinds of industry in the Philippines, involving relatively few turnovers between origin or arrival of commodities in the Islands and their final consumption or exportation, pyramiding of the sales tax might not be great. In the United States, however, with its highly integrated industry, the number of turnovers between origin of the raw materials to the final consumption or sale to other countries would be so large that the pyramiding or accumulation of sales tax through the various steps of pro-

duction and distribution would be most serious. Furthermore, the inevitable discrimination against the single-process manufacturer in favor of the multiple-process manufacturer or combination manufacturer-distributor would be a most undesirable economic condition, an irritating element in the business organization of the country and a possible source of political disturbance.

After considering the utter dissimilarity of business conditions in the Philippines from those in the United States, attention is to be directed to the yield of the tax in the Philippines. The annual report of the Collector of the Internal Revenue of the Philippine Islands shows that from revenue collections⁴ aggregating during the calendar year 1919 approximately \$27,000,000, about \$7,000,000 came from merchants, manufacturers, common carriers, etc., as "license, business, and occupation taxes." This appears to be the capitation under which the sales tax collections are included, though it is now clear that the \$7,000,000 was produced entirely by the sales tax.

Inasmuch as the population of the Philippines is approximately 8,000,000, the sales tax collections, the per cent rate being 1 per cent, were less than \$1 per capita of population. At the same rate of collection per capita the annual yield in the United States would be less than \$100,000,000, a comparatively negligible figure when considering the high sums of revenue we must raise for some years to come. On the other hand, advocates of the adoption of a sales tax in this country estimate the collections anywhere from \$1,000,000,000 to \$6,000,000,000. The lowest of these would amount to a per capita average of \$10, more than ten times that realized in the Philippines,

⁴ A statement of the collections appears on page 34 of the pamphlet recording the Hearings before the Congressional Committee on ways and means on "Revenue Revision" (1921).

and the highest amount would average \$60 per capita. A little study of these figures makes it obvious that it would be absolutely unsafe to base any experiments in the United States on the experience in the Philippines.

Mexico. Is it not rather humiliating to have the taxing system of Mexico held up to us as a model to be followed by the United States? The finances of Mexico do not give evidence of having been either well-planned or well-handled and while we all recognize that the continuous disturbances have in a measure been responsible therefor, it is to be borne in mind that none of the Latin countries of modern times has been so successful in dealing with national finances as to be a model to the Anglo-Saxon nations.

Incidentally, H. B. Fernald makes the positive statement⁵ that "It (sales tax) can be eliminated; it can be gotten around. The experience in Mexico has shown that conclusively, and therefore it is a tax which will be paid by the small man, while the large man, who is able to change his business organization, can avoid it."

Canada. The sales tax in Canada, whatever it may originally have been intended to be, is not at all the kind of general sales tax which has been ardently advocated for imposition in the United States. Many foodstuffs, coal and other necessities, are exempt from the tax, the law grants power to the Governor in Council to add to the exemption list, the tax is imposed on manufacturers, wholesalers, and jobbers (not on retailers), and while nominally at a uniform rate is in fact in addition to numerous excise or luxury taxes at varying rates previously imposed on many of the same commodities.

Also, it is not to be overlooked that the Canadian tax is of very recent ori-

gin and has not been in effect long enough to serve as a safe basis for conclusions as to its efficacy and the wisdom of this form of taxation.

France. The sales tax in France is likewise of such recent enactment that conclusions respecting it cannot have a very satisfactory basis. From the standpoint of fiscal results, at least, it has been very disappointing. The August and September 1920 collections were much less than one-half the amount estimated for the budget, which was ascribed in part to the newness of the tax. A recent issue of the "Revue de Legislation Financière," contains a statement showing that later collections, those of December, 1920, were still very unsatisfactory, being only about 50 per cent of the budget estimate. Reports from France also indicate that there is great dissatisfaction with the tax, not only on the part of the consuming public, but by the merchants.

In concluding this discussion of the sales tax the writer would like to quote the following comment by Arthur A. Ballantine, formerly Solicitor of Internal Revenue, on the fallacies of the sales tax:

I believe that this idea of a sales tax, a tax collected everywhere, falling on no one, is a will-o'-the-wisp which has floated over this field of taxation and which is in danger of luring business men who approach Congress in an effort to get really beneficial changes into futile action instead of constructive action.

I believe that this committee, by the very careful and exhaustive consideration which it has given to the advocates of this plan and its careful thought as to conclusions, has done much to dissipate this myth and to direct the efforts of business men into practical channels instead of down a pathway which leads to futility.⁶

⁵ Remarks at a meeting of the Tax Committee of the National Industrial Conference Board; quoted in Congressional Record, Vol. 60 page 2473.

⁶ Congressional Record Vol. 60, page 2474.

It is not within the scope of this article to discuss the fiscal policy of the government, or what taxes should be resorted to in replacement of the excess profits tax if the sales tax is not desirable. Yet the writer cannot deny himself the opportunity to express his firm conviction that sufficient attention has not yet been devoted to the reduction of the nation's expenditures.

XII

As this article is being written, the final session of the Sixty-sixth Congress is drawing to a close and disturbing reports are appearing in the newspapers with reference to its failure appreciably to decrease appropriations. For instance, *The New York Evening Post* of February 28, says:

Economy goes glimmering. Appropriations committees propose, but Congress disposes. This time it is disposing of economy as fast as the various money bills can be reached. The glowing promises of No-

vember are looking pale and wan on the eve of Inauguration Day.

If the same effort and determination as has been devoted by proponents of the sales tax had been applied to a campaign for reduction of governmental expenses, an appreciable approach toward the solution of the tax problem might have been made.

It would be a rash man who would venture to state with assurance the precise causes of the overwhelming vote against the party in power. Is it too much to say that one cause was a feeling that a new party in power would be more effective in regaining control of governmental expenditures which had run riot? It behooves the party now again coming into full power to realize that it is expected to produce results and that one of the most important of such results is to place the nation's government on a business basis and to alleviate the burden of taxation by eliminating to the utmost all needless expenditures.

ESTIMATED FUTURE BALANCE SHEETS AS A BASIS FOR LOANS

BY GLENN G. MUNN*

IN measuring credit risks with a view to determining the propriety of granting credit it is quite as important for a lending bank to know what the financial condition of the prospective borrower will be, one, two, three, or six months from the date of application as its past or present condition. Present and past statements are usually expected by banks considering a loan. The future condition, however, is more important to the bank than the present because a borrowing concern must liquidate its loan not on the basis of its present financial status, but on the basis of its status at the maturity of the proposed credit. The safety of any given loan, especially if uncollateralized, depends upon the success of business operations and market and price stability *after* extending the loan, not *before*. How, then, are plant operations and general business conditions in the immediate future likely to effect the financial condition of a borrowing concern while the proposed loan is outstanding?

Wherever a business is operated upon a budget system it is quite possible to forecast its future condition by translating the effect of expected operations into estimated future balance sheets. The purpose of a budget is to control disbursements. If the business also sets up an estimate of receipts, sales expectancies and other receipts, it has provided for a complete system of control. What a business will earn and spend in any given period are factors

which are to a very large extent predictable, and therefore, controllable.

Every business must either consciously, scientifically, or unconsciously, haphazardly, determine what volume of business it expects to transact for the ensuing fiscal period—month, quarter, or year—and plan its operations accordingly. In the nature of things this planning cannot be avoided. The setting up of a schedule of estimated receipts and disbursements is the only certain means of overcoming planlessness. All manufacturers have a natural hatred of overproducing, especially at a time when values are uncertain, inventories inflated, and a falling market anticipated.

Estimates of future receipts and disbursements are useful as a guide, not only to the business itself, but to lending banks. They are useful to the business in planning operations; to the banks in judging the credit risk.

The pivot upon which a system of financial control rests is the estimate of receipts made by the planning department. In any business the sales department must determine the magnitude of probable sales and collections for the ensuing period. The treasurer must estimate the amount of receipts from outside financing, such as bank loans, proceeds of sale of commercial paper, stocks, or bonds. All operating plans hinge upon these estimates. It is essential to the proper planning of the production schedule because the production department must know definitely how much of each product it must fabricate for next season's trade.

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The output should not be more than the sales department can dispose of. The production program will, therefore, be limited to an output predicated upon the estimate of sales made by the sales department. The production department is permitted to produce no more and no less.

After the sales program has been determined upon the production manager can then issue requisitions to the purchasing department for such equipment, raw materials and supplies, as is required. The production schedule will also control the employment program. The employment department must furnish the required number of skilled and unskilled operatives to finish the work on schedule. When the estimate of costs for the completion of this production program has been determined, the estimate of disbursements by months can be submitted to the treasurer whose function it is to provide sufficient funds to finance it. The treasurer can then formulate his program for financing the concern.

There are two bodies of business statistics which must be carefully consulted before any attempt to prepare a schedule of estimated receipts and disbursements should be made. These are:

1. *Internal Business Statistics*—The past records of operations, especially:

- (a) Sales (Gross and Net)
- (b) Gross Profit
- (c) Operating Expenses
- (d) Selling Expenses
- (e) Administration Expenses
- (f) Interest Charges
- (g) Depreciation
- (h) Taxes
- (i) Net Profits

2. *External Business Statistics*—Current and prospective business conditions as represented by the chief barometers and indexes of trade, such as are listed as follows:

- (a) Trend of Bank Clearings
- (b) Trend of Bank Deposits
- (c) Trend of Unfilled Steel Orders
- (d) Trend of Railroad Gross Revenue
- (e) Trend of Index Number of Wholesale Prices
- (f) Trend of Building Activities
- (g) Various Trade Reports, etc.

Perhaps the most important set of statistics in guiding operating policy, and in formulating the schedule of estimated receipts and financial budget, is obtained from the concern's own operating records for previous years. Certainly what a concern has been able to sell in previous years will furnish a fair guide as to probable sales in the next year. Similarly in the case of expenses.

In determining the sales and production programs, however, the information obtained from internal statistical records must be interpreted and revised to conform with the external business situation as shown by current and prospective business barometers. We are now passing through a period of business depression and every concern knows that its volume of trade is, say 20%, 30%, 40%, or 50% below that of 1919, or some other basic year. Assuming that the chief business barometers indicate a continuation of the present industrial slowdown, a policy of retrenchment will be planned and production curtailed accordingly.

Suppose an automobile manufacturer requires additional working capital to renew manufacturing operations beginning April 1, 1921, after having been practically closed down for the last six months. Assume that confirmed orders have been received sufficient to keep the plant busy at 60% capacity for the next four months, and 40% capacity for the following two months. A production schedule has

been planned to take care of these orders. In order to start operations \$2,000,000 of working capital are required. The concern opens up negotiations with several banks for six-month loans totaling that amount. Its financial statement is presented as follows:

BLANK AUTOMOBILE CORPORATION

FINANCIAL STATEMENT

March 31, 1921

ASSETS

(000 Omitted)

Real Estate, Plant and Equipment	\$25,000
Investments	100
Advances	1,000
Patents, etc.	10,000
Raw Materials	1,900
Goods in Process	100
Finished Product	8,000
Cash	1,500
Total	\$47,600

LIABILITIES

Capital Stock:	
Preferred	\$10,000
Common	24,000
Surplus	4,000
Deposits on Sales Contracts	500
Trade Notes Payable	4,000
Accounts Payable	5,000
Federal Taxes	100
Total	\$47,600

Current Ratio = 1.26 to 1

It is doubtful, indeed, if any bank would be willing to loan anything to this concern on the basis of its present statement. The current ratio (current assets to current liabilities) is only 1.26 to 1. This is a distinctly unfavorable factor of safety for a business of this sort and furnishes inadequate protection to a possible loan.

The company, however, has prepared a schedule of estimated receipts

BLANK AUTOMOBILE CORPORATION

ESTIMATED RECEIPTS AND FINANCIAL BUDGET

For Six Months Ending September 30, 1921

(000 Omitted)

	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	TOTAL
ESTIMATED RECEIPTS:							
Estimated Collections Based on Orders from Dealers . . .	\$4,125	\$4,750	\$8,000	\$6,265	\$5,950	\$4,400	\$33,490
Bank Loan	2,000	....	....	....	....	....	2,000
Total	\$6,125	\$4,750	\$8,000	\$6,265	\$5,950	\$4,400	\$35,490
BUDGET OF DISBURSEMENTS:							
Raw Materials and Supplies	\$2,000	\$1,600	\$2,280	\$1,775	\$1,350	\$900	\$9,905
Direct Pay-roll	1,250	1,700	1,785	1,800	1,355	1,600	9,490
Sales Expense	80	100	110	100	75	60	525
Advertising	50	150	150	130	80	50	610
General Administrative Expense	300	310	310	320	320	320	1,880
Interest	45	45	45	45	45	45	270
Taxes . . . . .	....	25	....	....	25	....	50
Accounts Payable . . . . .	....	....	1,000	1,000	2,000	1,000	5,000
Total	\$3,725	\$3,930	\$5,680	\$5,170	\$5,250	\$3,975	\$27,730
INCREASE IN CASH POSITION . . .	\$2,400	\$820	\$2,320	\$1,095	\$700	\$425	\$7,760

based upon orders from dealers, and a budget of disbursements together showing the estimated net results of operations for the ensuing six months. In spite of the fact that the present financial condition shows an impairment of working capital, the estimated schedule of receipts and disbursements indicate that if the loan is granted the company will, by reducing its inventories by one-third, recover its cash position sufficiently not only to pay off the bank loan, but to liquidate its other current liabilities and still have a margin of cash left.

For these budgets see page 506.

These estimates show that in the six-month period outlined, by reducing its inventories by one-third, the concern will increase its cash position, after paying off all accounts receivable, by \$7,760,000. With this amount it is in a position to liquidate the bank loans of \$2,000,000; trade notes payable of \$4,000,000; to pay six-months dividends on the preferred stock at 7 % per annum, \$350,000, and still leave a margin of \$1,410,000 cash in addition to what it had at the beginning of the period.

BLANK AUTOMOBILE CORPORATION
ESTIMATED FUTURE FINANCIAL STATEMENTS
(000 Omitted)

	ACTUAL MAR. 31, 1921	ESTI- MATED APR. 30, 1921	ESTI- MATED MAY 31, 1921	ESTI- MATED JUNE 30, 1921	ESTI- MATED JULY 31, 1921	ESTI- MATED AUG. 31, 1921	ESTI- MATED SEPT. 30, 1921
ASSETS							
Real Estate, Plant and Equip- ment.....	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
Investments.....	100	100	100	100	100	100	100
Advances.....	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Patents, etc.....	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Raw Materials.....	1,900	2,300	2,000	1,600	1,800	1,400	1,300
Goods in Process.....	100	500	600	800	700	500	600
Finished Product.....	8,000	7,000	6,500	5,000	5,000	4,500	5,000
Cash.....	1,500	3,900	4,720	7,040	8,135	8,835	7,260
Total.....	\$47,600	\$49,800	\$49,920	\$50,540	\$51,735	\$51,335	\$50,260
LIABILITIES							
Capital Stock:							
Preferred.....	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
Common.....	24,000	24,000	24,000	24,000	24,000	24,000	24,000
Surplus.....	4,000	4,200	4,320	5,940	8,135	9,735	11,660
Deposits on Sales Contracts ...	500	500	500	500	500	500	500
Trade Notes Payable.....	4,000	4,000	4,000	4,000	4,000	4,000	4,000
Bank Notes Payable.....	....	2,000	2,000	2,000	2,000	2,000	....
Accounts Payable.....	5,000	5,000	5,000	4,000	3,000	1,000	....
Federal Taxes.....	100	100	100	100	100	100	100
Total.....	\$47,600	\$49,800	\$49,920	\$50,540	\$51,735	\$51,335	\$50,260
CURRENT RATIO	1.26:1	1.23:1	1.25:1	1.43:1	1.72:1	2.15:1	3.44:1

Giving effect to the budgets in the preparation of future balance sheets by months from April 30 to September 30, the results are shown in the foregoing table on page 507.

By comparison of the surplus accounts on the above statements it will be seen that this concern has made in the six-month period, \$7,660,000. But by reducing its inventories by \$3,100,000 it has increased its cash position after deducting bank loans by \$10,760,000 net. After paying off \$5,000,000 of accounts payable, the net increase in cash as per comparative statements is \$5,760,000. In the meantime the current ratio has been improved from 1.26 to 1 to 3.44 to 1.

By estimating future operations this concern has given fair evidence to the lending banks that the loan would be justified. There can be no doubt that a concern having such control of its operations and finances that it is able to present a bank with schedules of estimated receipts and disbursements, and estimated future balance sheets based thereon, is in a preferred position when seeking a loan. It gives the banks a better basis upon which to judge the risk; directly because tangible figures are shown, and indirectly because the management shows its capacity to forecast both its operating situation and its future financial requirements.

METHODS OF MEASURING BUSINESS INCOME

BY WILLIAM ANDREW PATON*

THE periodic determination of net income on a rational basis has long been recognized as one of the important and difficult problems of the individual's economy. More recently its significance in the field of the business enterprise has come to be generally appreciated. The rapid development of the corporate form of organization, with its machinery for dispersing the various aspects of ownership among many classes of investors, has of course been a significant factor in bringing the business world to a realization of the paramount importance of periodic net income and the consequent necessity for preserving the integrity of the income account. With the right to income apportioned among several kinds of contractual and residual equities on an annual—or other periodic—basis, the need for accurate and reasonable income accounting becomes clear. Indeed, if the corporation in every case were to secure all its funds from a single homogeneous class of investors, the common stockholders, the fact that the membership might be continuously changing, due to the ease with which shares could be transferred, would render imperative the presentation of net income in terms of relatively short periods if equity were to be preserved between individual stockholders. Of more immediate consequence in this matter than the development of the corporation, however, is the advent of taxes levied on business net income and differential profits.

The income and excess profits tax program of the federal government has

brought the problem of the determination of business income acutely to the fore. Business men of all grades, from the proprietor of the small retail establishment to the managers of the huge corporation, are at last keenly alive to the significance of this question. It is now generally recognized that, with the state making heavy levies upon business income, rational accounting for such income becomes a matter of first importance. It is further recognized that current definitions of income require clarification and revision, and that current tools and devices for reporting income must be improved, if serious inequity and consequent business disturbance are to be avoided.

What is the nature of business income? What are its economic components? Can separate accounting recognition be given each intrinsic element?

It is difficult to formulate satisfactory answers to these questions. For our purposes it will be sufficient to emphasize the fact that, with respect to underlying economic divisions, the income of the typical business enterprise is peculiarly an amalgam. The business world is filled with complex entities, not specifically with the landlords, capitalists, and entrepreneurs of economics. Specific business income is likely to be a combination of several or all of the fundamental types of income; wages, interest, rent, and pure profit. In the simple sole proprietorship, where the owner is usually actively engaged in operation, wages, *i.e.*, remuneration for personal services may be fairly said to constitute an important part of the owner's net return.

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In the case of the large corporation, on the other hand, compensation for personal services will commonly form but an insignificant fraction of net income. Viewed broadly, the specialization of securities which has been carried so far in modern corporate financing, breaks business income into classes corresponding roughly to fundamental economic distinctions. But, looking at the specific security issue, it is often hard to come to a conclusion as to the precise character of the income involved.

The income of the representative business is of course largely derived through the production and sale of commodities or services. A considerable fund of capital is commonly required to cover the cost of the necessary fixed assets and to command a steady flow of the requisite current materials and services. If the personal service enterprise be excepted, it may then be said that business income, at least corporate income, consists largely in capital return. In this sense there is perhaps a kind of homogeneity in business income. At any rate the accountant usually starts from this position. For him the net revenue of the enterprise is the net return accruing on the capital invested. He endeavors simply to report this net operating, or managerial, revenue, and to show its correct apportionment among the various classes of investors. As a rule he makes no attempt to analyze net revenue into its precise economic elements. Such revenue and net revenue classifications as he adopts are largely in terms of operating departments and specific classes of product.

The periodic determination of this conglomerate figure, the net revenue of the business enterprise, is the crux of the work of the accountant. The stockholders' return, from the standpoint of federal taxation, is more sig-

nificant than total net revenue. But the problems involved in accounting for business income come to a focus peculiarly in the net return to the business as a whole, the proper distribution of this return being a relatively simple matter.

Even if all fundamental lines of analysis be ignored and the net income of the specific business be assumed to be a homogeneous thing for accounting purposes, the attempt to state this income in black and white on an annual or other periodic basis brings one face to face with almost insurmountable difficulties. How is net income to be measured under the complex conditions of modern business operation? What is the proper evidence of realization? On what bases are costs to be accrued? These and the related questions involved are so difficult of solution, when applied to the specific instance, as to tempt one to say that the periodic expression of net income for the particular business is, under the most favorable circumstances, no more than a good guess. The allocation of net income to specific periods involves estimates and judgments at nearly every point. It involves a periodic revaluation of the assets of the business. To determine income, accrued depreciation of plant and equipment assets must be taken into account; stock must be taken and priced; wasting natural resources, if any, must be depleted on the books; the amortization of patents and similar intangibles must be considered, etc. Only as the status of every fixed and current asset is re-determined at the end of the period can a rational figure for accrued costs be ascertained. And costs must be collected and deducted from gross revenue in order that the net revenue balance may be disclosed.

The difficulties in the way of rational cost determination and apportionment

are generally recognized. It is usually assumed, however, that the assignment of income credits to a particular period is essentially a routine matter. It is the chief purpose of this paper to show that this assumption is not fully warranted; that the difficulties do not all lie in the expense or debit side of the income account. The valuation of assets is a process which focalizes upon the income account directly as well as indirectly, through costs. The ascertainment of the base figure from which costs are to be deducted is a problem in itself. Current rules and devices for reporting the credit side of the income account may well be subjected to critical analysis.

For the accountant the problem of assigning income credits to a particular period simmers down to the question, What is the proper criterion of income? What is a satisfactory test or evidence of income? When is business income realized? Or, putting the matter more specifically in terms of the accounts, What shall be the "signal" for credit entries in the income account? In the following section this question will be examined.

II

The most conservative criterion of income is "cash." Cash—meaning thereby any medium of exchange freely accepted without discount—can be used to purchase any desired commodity or service whatsoever provided the same is available on the market, to retire obligations, to pay taxes, to pay dividends, to liquidate terminable proprietary investment, etc. Cash is the asset excellent. Consequently, the receipt of cash for product is the ultimate test of income realization. On this basis the immediate cash sale, or the collection of cash following the so-called credit sale, constitutes the indicia of revenue, the occasions for entries in the revenue account.

Cash, of course, may be received from many sources which in nowise represent revenue. Borrowings, for example, are obviously not income transactions. Further, it is not intended to imply that the amount of cash received from sales could measure net income. Cash receipts from customers would only represent gross revenue on a cash basis. Unless these receipts exceeded costs there would evidently be no net return.

Just how would the accounting procedures be affected if the cash criterion were actually adopted by the business enterprise as an income gauge? Essentially it would mean that the credit sale would not be recognized as a transaction affecting the financial status of the enterprise. That is, no formal accounting entries covering the sale would be made until collection. When cash was received the sale would be considered closed and the charge to cash and the concurrent credit to revenue would be entered. Periodically the cost of producing the goods actually sold on the cash basis would be determined and charged against this revenue. The resulting balance would be net revenue on a cash basis.

It might be urged that if the collection is to be the occasion of income credits, the expenditure should be the basis for expense, income debits. It does not seem to the writer that this follows. Expense must be defined as an adjunct of revenue, the controlling classification. The accountant's expense constitutes the *cost of producing a particular volume of revenue*. If revenue is represented by the receipts from a quantity of product sold expense becomes the cost value of this same volume of product. When a sale is finally closed on a cash basis, *i.e.*, when collection has been effected, the gross revenue appears. The expense of this sale would be the cost, including mar-

keting expenses, of the finished product involved. And current expenditures would be very unlikely to approximate in amount the cost value of goods exchanged for cash. This would be especially true in connection with fixed asset costs, where expenditures are made considerably in advance of utilization and final expiration.

There would, however, be some force in the contention that if cash collection is the basis of revenue, cash expenditure is the proper evidence of cost incurred. That is, if a sale transaction is not closed until collection, neither is a purchase actually effected prior to expenditure. But cost incurred must be sharply distinguished from expense. Values coming into the possession of the enterprise and values finally disappearing embodied in finished product are entirely distinct in principle, and only in the simplest trading situations are the two classifications likely to approach identity in a given period. This would be true whatever criterion of revenue were adopted.

Numerous objections to such accounting for income at once present themselves. The account receivable, it may be contended, is a bona fide asset.¹ Further, it can be pointed out that title to the goods involved may, under certain circumstances, pass to the buyer prior to cash payment. In this event the selling company must either consider the goods shipped as still an asset on its books, an actual misstatement from the legal point of view, or view the transaction as involving a temporary loss, likely to be recouped a little later. If the seller should treat finished stock as an asset until collection, and the buyer were to recognize purchases prior to payment therefor, this would mean that the same merchandise was being con-

sidered an asset simultaneously on the books of vendor and vendee, a highly anomalous situation. As stated above, the view that collection is the criterion of income is consistent with the idea that payment is the accounting occasion of purchase. Evidently if this notion were actually adopted with respect to the recognition of cost incurred it would mean, in extreme cases, that materials would be acquired, manufactured, and sold for cash in finished form prior to their accounting acquisition. In other words, the recognition of cash revenue might antedate the recognition of some of the actual costs of this revenue, an obviously ridiculous state of affairs. This would be an unusual situation, however, at least in manufacturing. In general the manufacturer would make payment for his principal current costs as well as for his fixed asset costs prior to receipt of cash from the sales in which these costs were embodied.

It is not intended here to argue in support of the cash standard of gauging income, but simply to suggest what would be involved if any such criterion were actually adopted. It should be emphasized that accounting for income on a cash basis by no means involves a bare comparison of the cash balance at the beginning of the period with that at the end. Such a crude device for measuring income, although still employed in a surprising number of cases, is, of course, without a shred of justification as applied to the conditions of the ordinary business enterprise. Cash transactions which relate to capital equities and fixed assets are wholly outside the current income account. The procedure outlined above involves the only rational application of the cash evidence to the income account. To credit revenue with the amount of closed, *i.e.*, cash sales, allocating thereto the cost of these sales and consider-

¹ This matter will be further discussed in the next section.

ing net income as disclosed by the balance, is an accounting scheme not wholly devoid of reasonableness. Memoranda of credit sales would of course be necessary. Even journal entries of a suspense variety might be made, the registering of effect upon income, however, being postponed until collection.

In individual affairs as opposed to the business enterprise cash accounting for income is common. Probably a large majority of individuals are not satisfied that income is realized on any but a cash basis; conversion to cash is here usually accepted as the proper evidence of revenue. This state of affairs is definitely recognized by the federal government in the administration of its income tax program. The individual may prepare his return on the cash basis provided he elects to do so consistently; and a great majority of the individual returns filed are actually prepared according to this plan.

In business the principal case where cash income accounting is recognized as a satisfactory procedure arises in connection with so-called contract or instalment sales. Here it is considered good practice to make collection the occasion for the recognition of income. Where goods are "sold" on this plan collection is not always a mere routine incident, following sale as a matter of course. The collection department may be of the utmost importance; cost of collection may be a significant fraction of total expenses; the collection of instalments may constitute, in a sense, the last important stage in the process of production. In extreme cases collection overshadows all the other costs. Certainly in such instances to await the receipt of cash before recognizing revenue is not unreasonable.

The Treasury Department, to refer to income tax procedure again, permits the taxpayer to report income arising

from instalment business on the basis of cash receipts, instalments paid. He may, however, if he chooses to do so consistently, treat the total of the obligations of his customers as the equivalent of cash. If a considerable percentage, more than twenty-five per cent, of the gross contract price is immediately paid in cash the taxpayer must consider the transaction as closed for income tax purposes. In general the accounting profession approves these rulings, it being recognized that the typical instalment sale is rather flimsy evidence on which to require a showing of income.

Where credit relationships are soundly established receipt of cash may be a fact of minor importance, an incident occurring more or less automatically. In other cases, even outside of instalment sales, where the relation of seller and customer is new, and less solidly grounded in business practice, collection is a serious matter. It is a well-known fact that in many lines a considerable percentage of sales is never collected. This matter will be further discussed a little later.

The cash criterion of income has a strong though often irrational foundation in business psychology. Ask a business man his opinion as to what constitutes effective, realized income and his reply, if not explicitly supporting the cash doctrine, is at least likely to be strongly flavored by it. The same may be said to be true to a lesser degree of accountants themselves. When is income realized? The writer believes that most people, in attempting to answer this question, have in mind conversion to cash. The even more extreme idea, that effective net income for a period is actually present in the cash account, is common. There has been considerable complaint, for example, to the effect that taxes levied on net income which is tied up in re-

ceivables are unreasonable, necessitating, as they may, the borrowing of funds to meet the tax installments. This conception is, of course, erroneous. Even if the cash sale were taken as the sole evidence of income the net income for a period would not, usually, measure the cash balance or the change in that balance. It should be emphasized that net revenue, determined on any reasonable basis, does not commonly measure any specific asset. All that may be said of the credit balance of the income account in terms of the assets is that this balance, from the standpoint of ownership, measures the recognized increase in total assets, due allowance having been made for additional investments, borrowings, and payments of principal or income to the creditors and proprietors. This increase is likely to be represented in various asset accounts; merchandise, receivables, cash, equipment, etc. Only in the event that there were no cash investments or retirements whatever; that there were no fixed asset costs; and that all current items were acquired, paid for, and consumed within the accounting period in question, would the net income balance for a period precisely measure the change in the cash balance. Even if the cash collection is taken as a token of revenue throughout the period, this simply means that gross revenue, from the asset standpoint, passes through the cash stage. If the increase in the cash balance corresponded to the net revenue, it would be purely a coincidence in the typical case.

III

The evidence of income most widely adopted by the accountant is, of course, the sale transaction; the credit sale being treated as of equal importance with the cash sale with respect to effect upon revenue. That is, the conventional

sale, whether payment is made immediately or is postponed, is considered as the proper occasion for credits to the income account. Since, in many lines, from eighty to ninety-five per cent of all sales are on a credit basis, this means that the credit sale is often the typical revenue transaction.

What is the credit sale? But a brief statement of the nature of this transaction will be attempted here. The passage of title is probably the test most commonly applied to distinguish the genuine sale from the order or contract. As a matter of fact little attention is usually paid to the technical matter of title passing in the routine work of entering gross revenue. The order is received and acknowledged; the goods are manufactured or, if in stock, are prepared for shipment; the goods are consigned; receipt of shipment is acknowledged by consignee; the buyer accepts goods and pays transportation charges; a check on account is received by the vendor, etc. At what step in such a chain of circumstances is the sale completed? When does title pass? The accountant, without attempting to thresh out the legal niceties of each case usually seizes upon the act of consignment as the evidence of the completed transaction. That is, shipment is taken as the occasion for the credit to revenue. Some orderly plan for establishing a sequence of book entries is necessary; and the conventional procedure seems fairly satisfactory. In many cases title doubtless actually passes at this point; but this is certainly not always the case.

To consider the credit sale as an indicium of income involves the recognition of accounts receivable claims against customers, as an asset. The accountant views the credit sale as an exchange of product, valued on a cost basis, for an amount of current claims exceeding these costs, supposedly, by

the income margin. Sales is of course commonly credited with the gross amount of these claims and the costs are periodically deducted, *en masse*. The question arises, just how valid an asset is the account receivable?

An account receivable constitutes precisely what has already been stated, a *claim* against the customer. It is commonly supported by some formal documentary evidence such as the order, shipping-room records, duplicate bill of lading, etc. It is, in general, an enforceable claim, *i.e.*, if the seller can demonstrate that valuable commodities have been shipped on account to the buyer he can take definite legal steps to require payment or, in some cases, force a recovery of the goods. The trade creditor has a soundly established legal status.

On the other hand, if attention is directed to the specific transaction, it becomes apparent that the credit sale is really but a sort of "gentleman's agreement." The customer has merely promised payment in the event goods are delivered as ordered; and in many cases the promise is tacit rather than explicit. Frequently no date for payment is set and the terms are in some other respects vague. The situation often lacks finality. The consignor expects payment, but there may be many a slip between shipment and collection. In general the buyer is conceded the right to return the whole consignment if the goods are unsatisfactory. At least this is widely true in the trading field and to a considerable degree elsewhere. If the vendee were to insist on returning the shipment, whether or not the excuse given therefor were reasonable or convincing, the seller would very seldom attempt to enforce settlement. If the goods are reconsigned to him about all he can do is make the best of it. In other words, while collection follows more or less automatic-

ally in many instances, there is a sense in which the specific credit sale is only a tentative transaction. Settlement will probably follow but there is no certainty in the matter.

Even if the goods are accepted by the buyer collection may be a long and costly process. This is especially true of instalment business as was pointed out above; and it is true to a most unfortunate degree in many other cases.

It appears, then, that the account receivable is a *bona fide* asset and the credit sale, hence, a valid evidence of revenue to the extent that such a claim may be reasonably said to be enforceable, sure of collection. Obviously this depends upon the actual circumstances of each case. The accountant's assumption that these claims are assets is, in general, not unreasonable. Accounts receivable are almost universally recognized as an important current asset, but one degree removed from cash. Cash may be borrowed on the basis of this asset; and the accounts may be actually sold for cash in some cases, although commonly at a ruinous rate of discount.

It may be pointed out that, if sales and collections happen to coincide in amount in a particular period, the gross revenue figure is the same whether the cash or the combined cash and credit basis be followed. However, any precise correspondence or consistency between sales and collection curves is very unlikely. In principle the two criteria, the cash receipt and the credit sale, are quite distinct. The conventional plan of accounting for income involves taking the credit transaction as the typical occasion for the revenue entry. Conversion to cash is not awaited, and hence cash receipt is not used as the criterion of income. In view of popular misconceptions in this connection, this fact needs emphasis. Conventional accounting in-

come is not cash income. In particular cases it may easily happen that the slowness of collections toward the end of a period results in a heaping up of customers' accounts and a consequent unsatisfactory cash condition. Yet the showing of income may be highly favorable. Evidently income has not yet been realized in cash.

It is important to notice that if the sale is to be used as the exclusive evidence of income all assets must be revalued, consistently, on a cost basis. To take any asset into the books at a figure above cost would involve the recognition of value enhancement, income in the broadest sense, without sale. Further, the widely advertised rule for pricing current stock, cost or market whichever is lower, is really inconsistent with the view that the income account depends upon sales. If the sale is the proper criterion of income then it follows that all merchandise assets should be valued at cost! The accountant who in one breath insists on the importance of the sale as the sole trustworthy evidence of income, and in the next contends that current assets should be priced at cost or market, whichever is lower, is throwing reason to the winds. These two ideas simply do not ride together in the same vehicle. It is most unfortunate, from the standpoint of the development of rational accounting, that this entirely ridiculous rule of valuation has secured such a foothold in income tax procedure and elsewhere.

One further question may be raised in this connection. If the customer's order or contract is binding, why have we not therein a satisfactory evidence of income? In other words, if the buyer obligates himself to purchase a definite quantity and value of goods why cannot the effectuation of this arrangement, the securing of the order, be taken as a criterion of revenue? It

is true that the booking of the order is sometimes the most significant financial fact in the whole chain of circumstances surrounding the sale, shipment and collection being routine matters. It is not hard to find cases where the management considers the placing of the sales contract as more than half the battle. The order may be a very "valuable" consideration. In fact money may, in some cases, be borrowed upon a showing of orders as well as upon a showing of accounts receivable. The intrinsic financial status of the enterprise may be decidedly affected by orders. Why, then, is not the binding order as fair an evidence of income as the enforceable customer's account?

In the first place it is evident that unless the goods ordered are produced and in stock, it would seem rather unreasonable to recognize the order as a valid asset, and thus accrue income in advance of both production and delivery. Income can hardly arise prior to the incurring of the expense of production. Contracts and orders have sometimes been included in the balance sheet as an asset, even though the goods involved were not produced; but the accountants have wisely frowned upon such practices. Certainly orders are not receivables. On the other hand if the goods ordered are already in stock, and the sales agreement is binding, there is some force in the contention that the consummation of the agreement is a significant evidence of income. The accounting for such income would be somewhat troublesome, however. As long as the goods ordered were viewed as included in the seller's assets the order itself could hardly be considered an asset, at least in gross. The realized additional value would be, at the most, the amount of net revenue involved. This enhancement could be conceived as inhering either in finished stock or in the sales

agreement itself. If the finished stock account were charged with the estimated net income on orders received, the income account being concurrently credited, the balance of the transaction would naturally be viewed as, (1) an exchange of finished stock, plus shipping costs, for accounts receivable of the same amount and, (2) as an exchange of receivables for cash. This amounts to valuation at the contract price less estimated costs yet to be incurred. The propriety of this method of valuation is sometimes recognized in practice. In such cases it appears that the contract, the binding sales agreement, is recognized as having some force in determining the incidence of income.²

Further, it must be remembered that the binding order is not as typical of business as the enforceable account receivable. Witness the recent wholesale canceling of contracts and agreements because of price recessions! In general the delivery of goods constitutes a sounder basis for legal action than the booking of an order.

IV

Another possible accounting evidence of income of considerable theoretic importance, and having limited application in practice, is "technical completion."

In some fields of industry, it has been urged,³ that physical completion rather than final sale and disposal, on either a cash or a credit basis, is the significant test of income realization. Let us briefly examine this proposition.

The validity of this criterion in a particular case depends essentially upon

² It is doubtful if such procedure would really mean that the order were being taken as the basis of income. This will become apparent in the next section.

³ See W. B. Gower, "Unsold Goods and the Income Account," *Journal of Accountancy*, issue of March, 1920.

the conditions actually obtaining. The allocation of income to accounting periods in terms of production rather than sale is not an entirely unreasonable procedure if production is the main end of the enterprise, subsequent sale being merely a routine incident, to be taken for granted. If the efforts of the management and the costs incurred relate almost entirely to physical production, the piling up of finished stock is the significant goal of the enterprise. In other words, if the operating staff is large, the equipment elaborate, and the technical processes long and costly, while the sales department is small, engaged in routine work, and with insignificant costs, there is some justification for considering the transfer of the completed article to the stockrooms, rather than consignment, as the most reasonable occasion for the income entry. In such a case it may fairly be argued that technical completion, not the sale, is the significant financial event.

Where, if at all, do we find such conditions? Evidently only where there is an assured demand for all output. This is approximately the case in the production of certain staples. Agricultural products furnish perhaps the best examples. The farmer is virtually assured of a market under almost any set of industrial conditions, although not, however, at any particular price. Getting the wheat to the bin is for him the long and expensive task. Sale and delivery are thereafter largely routine matters although delivery cost is by no means always negligible. Thus the farmer frequently hauls produce some distance to market without having made in advance any specific provision for sale; he knows that sale is assured at the going price.

Coal-mining furnishes, perhaps, another illustration. Coal is a staple raw material throughout industry, and

the principal household fuel. The coal producer, consequently, can market almost any output without special selling effort, his deliveries being conditioned primarily by the availability of transportation facilities. Sale of a reasonable output is practically assured. The production of lumber, copper, petroleum—in fact almost any fundamental raw material—presents these conditions to some degree.

The Treasury Department, in allowing farmers the privilege of pricing unsold product at the end of the period at current selling price less estimated marketing costs, is recognizing the validity of this principle as a basis for reporting income in tax returns. If a farmer adopts this rule it means, essentially, that he "takes his profit" in the year in which his wheat, for example, is raised, rather than the year in which it happens to be marketed, provided the two are different. In other words, he recognizes physical completion as the evidence of income realization. This heterodox ruling of the Department is likely to have a considerable influence on accounting opinion with respect to rules for valuation and income reporting. It would not be very surprising if the plan were extended to other branches of the extractive industries.

In manufacturing, selling costs are likely to be high and sale can seldom be taken relatively as a matter of course. Specialized goods do not usually have an assured market for any considerable period. Sale thus becomes a financial fact of the first importance and a more reasonable evidence of income than mere physical completion. On the other hand, wherever sale does follow manufacture more or less automatically, without heavy additional costs, there is something to be said for the other principle. Certainly this is true in the case of binding orders, contract sales. While the occasion of securing

an agreement in advance of production hardly furnishes a reasonable basis for the recognition of income, as was explained above, the completion of the article under such an agreement virtually settles the question of income. The profit is realized; shipment and collection follow as routine incidents in the conversion of product to cash. The accountant is indeed usually willing to admit the propriety of this principle under such conditions. Title, strictly speaking, may not have passed; but all essential steps in production have been taken.

As stated above, booking income on completed but unsold goods involves the valuation of stock at selling price less estimated marketing costs to be incurred. In general accountants are agreed that such a rule of valuation is thoroughly vicious. It involves, they say, the recognition of an "unrealized" profit; if sale is not finally made the supposed profit will disappear. As a matter of conservatism this position is reasonable enough; although its logic is weak as is the case with other accounting views based largely on conservatism. The same thing may be said of the credit sale: unless collection follows the supposed profit evaporates. Sale is only one test of realization; there may be others having some validity. It is not intended here to defend strongly any heterodox principle of valuation; but it may not be unreasonable to raise a question as to the legitimacy of this wholesale condemnation of selling prices, properly adjusted, as a basis for pricing finished goods. Conditions in the business world are highly varied, and probably no one principle of valuation, and no single evidence of income, should be universally and rigidly applied. The instances mentioned above (inventories of farm products and goods produced on binding contract) of the acceptance,

in practice, of technical completion as a basis for income entry, make it necessary to treat this principle seriously.

Doubtless the accountant's position in this matter is justified in the majority of cases. Certainly in the trading field and in most manufacturing lines the sale is not an event to be taken for granted; it is rather a most significant circumstance in the chain of operating and financial happenings. Sale, rather than completion, is probably much the better evidence of income in such cases. Viewing production broadly the selling activity here becomes a part of operation, the capstone of the whole process; and, hence, to consider income as realized prior to sale involves the recognition of revenue prior to completion itself, in the economic sense.

V

"Percentage of completion" as a criterion of income is a modification of the principle we have been discussing which should receive some consideration. "Completion" here may mean mere physical production or, better, economic production in the broad sense just mentioned. The argument in favor of this basis for measuring income may be put somewhat as follows. Why take a specific occasion such as completion or shipment as an evidence of income realization? Is it not unreasonable to assume that income suddenly appears, on the instant, in toto? Business operation is a continuous process, not a succession of completions and consignments. Why, then, should not the acquisition of income be viewed as an orderly, gradual accrual arising throughout the entire period of production? In other words, why should not income be accumulated on the books in terms of some reasonable scheme of completion percentages?

From a broad economic standpoint this idea has much to commend it; and it would seem to be consistent, in a sense, with one of the fundamental assumptions of accounting. The accountant always takes it for granted that the costs of all commodities and services expended toward a certain end in some way come to pass over into and inhere in the object for which they were expended. Cost accounting is based on this assumption throughout. If then, the values of the purchased commodities and services flow into work-in-process and, finally, into finished goods, why can we not assume that the values of the peculiar services and conditions furnished by the business itself also gradually accumulate in these goods? From the standpoint of economic theory one idea is quite as sound as the other. The consumer pays a price which covers the enterpriser's costs and his income as well. As far as the purchaser is concerned the entire sum is economic cost, and the item would be charged on his books at this total figure. And if this cost may be gradually accumulated on the producer's books with respect to certain essential commodities and services why can we not say that all costs⁴ so accumulate? As a matter of price determination both assumptions are unsound. That is, the fact that a particular business establishment has certain costs, and desires a satisfactory rate of payment for its own services, will have little or no effect upon selling prices in the long run. The commonly-accepted idea that the specific business management can literally set its own prices, does not at all square with the facts except in a few special and probably temporary situations.

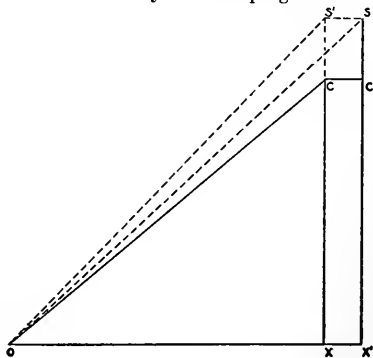
But the accountant depends upon

⁴ The income of a particular enterprise may, of course, include pure differentials as well as a payment for necessary, price determining services.

the Marxian doctrine that costs expended upon an object in some mysterious way pass over into that object and constitute its value. It might seem, then, that he could consistently go a step further and assume that the values of the services of the enterprise itself flow steadily into production, and do not instantaneously appear, full-fledged, on the occasion of shipment or other specific event.

The difference between the accountant's conventional plan for recognizing income in terms of sales and the other schemes we are discussing can be brought out sharply by means of a diagram. In the accompanying figure the line OC represents the gradual accumulation of cost values above the base line OX from zero to the amount CX, the cost at the instant of technical completion. During the interval the finished stock is held in the storeroom awaiting shipment, the accountant commonly assumes that this value remains unchanged; and thus we have, just at the instant of consignment, the equivalent amount, C'X'. To the extent that storage and marketing costs are being incurred such an assumption, of course, would not be strictly correct. Actual consignment, however, the signal for income recognition, involves an instantaneous increase in values (the total being booked as receivables) by the amount of the income margin, C'S (ignoring storing, shipping, and collection charges). The solid line OCC'S, then, represents the course of value accumulation on the books when consignment is taken as the evidence of revenue. Similarly, if physical completion is adopted as the criterion of income, the course of value accumulation is represented by the line OCS'S. In both of these cases the period during which stock lies in the warehouse is considered as bringing about no change in value, the essential

difference between these two plans evidently lying in the choice of the occasion for the income entries. If, now, income as well as cost be considered to accrue uniformly during the period from initiation to physical completion, the dotted line OS'S represents the accumulation of values. Again the value is assumed to be constant in the interval between completion and disposition; but the whole process of manufacture, not the specific occasion of completion or shipment, is considered to give rise to income. The dotted line OS represents the course of value enhancement if income and cost are assumed to accumulate steadily during the entire period from initiation to actual sale. This variation would be the more reasonable if storage and marketing costs, and the interval between completion and sale, are assumed to be of importance; for surely if income can be said to accrue in terms of costs and time one class of costs and one section of the period is as valid an evidence as any other. The dotted lines are used in the figure to indicate the unorthodox character of the schemes of valuation involved. For convenience OC is made a straight line, although of course cost is seldom if ever incurred in any uniform progression.



Just what would be the procedure involved if percentage of completion in either of the senses mentioned above were used as the basis for income recognition? How, specifically, could percentage of completion be gauged? Should time, physical quantity, or cost be used as a test? As implied above, the most reasonable plan would be to recognize income (in part, at least, in itself an element of true economic cost) as accruing in proportion to costs incurred. For example, if an article cost \$100 from the standpoint of the producer and sold for \$120, every dollar of cost incurred might be said to give rise to twenty cents of income. The value of the finished article could be gradually built up on this plan to \$120. The charges to the article in excess of cost incurred would be concurrently credited to income. The final disposition of the article would then constitute merely the exchange of product valued at \$120 for new assets of equivalent amount. The entire profit, therefore, would have been gradually recognized prior to sale.

Even if such a scheme were adopted it would of course be inexpedient to attempt to organize the accounting procedures in such a way as to bring about a steady flow of entries in the income account. Periodic recognition of the accrued income would be all that could be accomplished. Thus, in the above illustration, if production consisted of four important stages, each of which required the incurring of \$25 in costs, the goods account might be charged with the accrued income in four successive increments of \$5 each, the income account being concurrently credited. Or, such analysis might even be neglected entirely until the close of the fiscal period, at which time goods produced in the current period and still on hand might be written up and income recognized for the proportion of

the income margin applicable to goods on hand, which the costs incurred to date bore to the total of costs to be incurred thereon (including those to date) prior to completion. This last procedure would mean that technical completion was being used merely as a supplementary evidence of income. The income which would result for the period, however, would be the same in each case.

In practice about the only important case where such a scheme of valuation and income accounting is conceded to be valid arises in connection with long-term processes. The process of fabricating a vessel, for example, may cover several accounting periods. It is recognized that if final completion and disposition were used as the evidence of income in such situations very irrational income statements would result. Thus a shipbuilding company might begin several jobs in a particular period and complete none till a later period. In such a case it is evident that the conventional scheme of income accounting is somewhat unreasonable; all of the income can hardly be said to arise in the single period in which the several vessels are finished and turned over to the buyers. In general accountants have long admitted the propriety, in such instances, of the recognition of income in terms of completion percentages.⁵

Has this criterion of income any wider application, however, as a practical matter of accounting? The writer does not believe so. While it is true that from the standpoint of economics there is as much force in the assumption that business income (a part of economic cost) accrues as surely as other costs incurred by the buyer, there are fundamental objections to the general adoption of such a concep-

⁵ The same principle is approved by the Treasury Department in Article 36 of Regulations 45.

tion by the accountant. Accounting, it must be remembered, deals with specific enterprises; and hence the accountant must adopt essentially the viewpoint of the owners and managers of the particular business entity. And from the standpoint of the owners, costs incurred, purchased commodities and services, constitute a very different classification as compared with the peculiar services and conditions implicitly furnished by the business itself. The business does not buy or incur its own services; hence their value should not be entered as if they had been actually acquired. It is the buyer of the completed article who purchases the services of the producing enterprise. The expense of doing business and the net return are two very different things from the standpoint of the owners. Expenses are actually incurred; there is no assurance that income is thereby accruing. One process is a definite matter of record; the accrual of income would be based purely on assumption. The whole scheme of modern income accounting is organized in such a way as to show net return as a residuum, a difference between selling value and expenses. To accrue profit in general would be entirely unsound. Only where sale is assured, and the process long, should any such accounting be attempted.

VI

In none of the evidences or criteria of income thus far considered has the matter of price movements been recognized. Due, however, to the fact that serious changes in prices may occur while particular assets are held by the business enterprise it must be admitted that the financial position of the enterprise becomes affected thereby. The question arises, Should specific recognition be given to changing costs as applied to units in hand in determining

business income? Or, more specifically, is mere enhancement in value of unsold goods a valid evidence of income? Should credits be made in the current income account to cover appreciation?

It is entirely beyond the scope of this paper to discuss this question fully.⁶ It is desired, however, to call attention to a few considerations in this connection. In the first place it should be emphasized that the broad definition of net income as measuring the difference between the true net worth of a business at the beginning of a given period and its net worth at the end of the period has considerable force. In the individual's economy some such calculation is common, even if his accounts are not prepared strictly in accordance therewith. And the accountant or business management is likely to agree that this conception of income is a fairly valid one, at least as a starting point. But what measures true financial condition, the literal original cost of assets on hand (adjusted to allow for depreciation) or the current cost which is the cost of replacement?

In the writer's opinion, the true economic significance of an asset to a business is in general measured most accurately (ignoring depreciation) by what it would cost, currently, to acquire the item. Certainly costs of replacement are of more importance in price determination than original costs. *Cost of replacement is effective actual cost.* Any business man who ignores this principle is taking a step in the direction of business failure. The manufacturer of munitions who acquired plant and materials on the basis of low prices, for example, could not thereby have afforded to undersell his representative

⁶ The writer's opinions on this matter are more fully expressed in Paton and Stevenson's "Principles of Accounting," Chapters XX-XXI.

competitor who had constructed plant and equipment at war prices. Further, representations of values in terms of reliable current conditions are more satisfactory evidences of true worth as a basis for credit, or for most other purposes, than figures prepared on any other basis; this despite the protestations of accountants to the contrary.

Appreciation is a fact; it is not an assumption. Thousands of land-owners have become well-to-do through the enhancement of their holdings. The same may be said of the holders of securities. The individual, or the business, that owns securities worth a million dollars on the market has 1 million dollars in effective property, regardless of the cost. Later his wealth may be more or less than this sum, but his present worth is unquestionably the 1 million. To argue that the owner of property which has doubled in value has no more wealth than before is folly. If the value, measured on the same basis as used when the property was originally acquired, has doubled, his wealth has doubled. Wealth can surely be acquired through enhancement without transfer.

The typical extracting, manufacturing, trading, or financial enterprise, however, is not in the business of holding property for enhancement. It is rather acquiring materials and services so as to carry on certain operations which will result, presumed, in salable commodities or services. Despite the truth of what has been said above it does not follow that enhancement is, in general, a satisfactory criterion of income to apply to the conditions of the business enterprise. The recognition of income in terms of sales is a policy conforming to the actual business process; and a convenient accounting procedure following this plan can be readily worked out. Enhancement of values due to advancing costs of replacement

is, at the most, an incidental and supplementary sort of income. In so far as the enhanced goods are sold the appreciation becomes a part of sales revenue. Evidently the recognition of appreciation *per se* involves merely the valuation of goods on hand at cost of replacement. In this limited sense there is something to be said for the recognition of appreciation. That is, the valuation of goods on hand at the end of an accounting period at cost of replacement is not an irrational principle. In fact the consistent valuation of standard materials and marketable securities at bona fide replacement cost is a thoroughly sound procedure aside from income tax rulings and some other legal complications; and it has many defenders among business men. It is generally agreed among accountants that the most reasonable scheme for determining the cost of goods on hand is to assume the current stock to consist of the most recently purchased goods, an assumption which of course does not literally square with the facts; and this procedure, it should be noted, approaches in many cases the adoption of current cost as a basis for valuation. This interpretation of "cost of goods unsold" has likewise been adopted by the Treasury Department. The difference between this scheme of finding cost and the cost-of-replacement principle is evidently largely nominal. Cost inventories are thoroughly reasonable if the goods on hand are assumed to be those most recently acquired. On the other hand the consistent use of a bona fide replacement figure would be a simpler procedure and quite as reasonable.

It should be clear from the preceding discussion that, so far as realization is concerned, actual enhancement represents effective income about as fully as accounts receivable or new merchandise acquired following the conversion

of customers' accounts to legal tender.⁷ Further, a merchandise value based on cost of replacement is *no more likely to disappear than any other asset value in the business*. There is no assurance that original cost values will be maintained. Again it should be clear that the recognition of enhancement which simply measures the change in effective current cost would not in general involve the anticipation of income, the accruing of the normal income margin. Of course selling prices follow changing costs of replacement more or less imperfectly in specific cases, and where this is true the pricing of stock on hand at current cost may mean the recognition of a fraction of the normal income margin in advance of sale. It should be emphasized, however, that, in principle, pricing stock on the basis of selling price and pricing on the basis of cost of replacement are entirely distinct procedures.

Income consisting simply in appreciation is evidently a particular kind of income from the accounting standpoint. It would usually be thought of as a non-operating income. Its recognition, however, would not mean that the accountant should abandon all effort to distinguish between operating and incidental or speculative income. Income arising in connection with the main purposes of the business may well be segregated, so far as possible, from ancillary or accidental revenue. But it should be emphasized in this connection that operating income as conventionally determined by the accountant

is by no means the result of a purely physical process. In any business the current of technical operation and that of economic movement and accident are more or less inextricably tied together. In other words, it is exceedingly difficult for the accountant to trace, separately, the precise effect of the efforts of the management and the effect of price movements and other influences over which the management has little or no control. Business operation, for the accountant, is more of an economic process than an engineering. From this standpoint also net revenue is a conglomerate. The inclusion of an item of enhancement, then, need not be viewed as an accounting catastrophe.

Highly marketable securities are the asset with respect to which current price is a particularly valid basis for inventory. Buying price and selling price are here approximately identical. Standard raw materials and merchandise may also, with reason, be valued at cost of replacement. Goods in process and finished stock furnish a much more dubious case. It would be technically possible to value such assets on the basis of current costs of labor and materials: even overhead might be similarly adjusted. Such a procedure would be troublesome, and yet not wholly unreasonable, advancing manufacturing costs commonly having a prompt effect upon selling prices. With respect to plant and equipment and other classes of fixed assets the propriety of cost-of-replacement valuations is still more questionable. It will be sufficient to note here that the current market frequently has little significance in connection with fixed assets. A company buying a site and constructing a costly factory building thereon, for example, has virtually committed itself to a course for several years at least. Advancing cost with

⁷ This can be shown effectively by a rather extreme illustration. On Jan. 1, 1920, A and B each buy ten shares of Merry Steel at 100. Later B sells at 110 and buys Locomotor. On Dec. 31 he sells Locomotor at 125 and buys Merry Steel at 125. A "sits tight" throughout the year. A and B begin the year in identical positions. At the end of the year the identity persists, yet B, according to conventional accounting methods, would have realized an income of \$250, while A's books would show no income. As a matter of fact A has clearly made the same income as B.

reference to contiguous land does not certainly indicate effective income for the manufacturer in such a case. Still there is much to be said on both sides of this question.

In this section it has been the writer's purpose merely to indicate that advancing cost of replacement, bringing about an enhancement of stock in hand, is a further supplementary evidence of income, which, in connection with certain classes of assets, has considerable validity.

VII

A few general considerations should be emphasized in conclusion. First, the determination of a satisfactory evidence or test of income is essentially one aspect of the problem of valuation. Thus if the sale is to be used as the exclusive criterion of income this means that stock in hand must be valued at cost. Taking technical completion as the gauge of realization involves valuation at current selling price less estimated marketing costs. Percentage of completion as basis for revenue recognition implies inventories calculated by applying completion percentages to prospective selling figures. The recognition of appreciation as effective income requires the taking of inventories on the basis of costs of replacement. Each method of measuring income connotes a particular principle of valuation. As was stated in the introductory section, the problem of valuation is of vital importance in the preparation of the income account not only because costs are only determined as a result of valuations but also because the volume of credits in the revenue account depends to some extent upon the nature of the valuation principles adopted.

In the second place it should be noted that the effect upon the income

sheet of the adoption of one particular scheme of recognizing income and its concomitant principle of valuation as compared with another is virtually nil over a long period. That is, if the accounting period were, say, ten years in length all of the different plans would give essentially the same net revenue for the period. It must be emphasized, however, that this in no wise means that it is actually a matter of indifference which scheme is followed. The popular notion that a mistake or a misjudgment in the accounts of one year will tend, automatically, to be rectified in the succeeding period, while true to a degree, cannot be recognized by the accountant as of consequence. Accounting might almost be defined as the art which attempts to break up the financial history of a business into specific units, a year or less in length. That is, it is the business of the accountant to prepare valid statements of income and financial condition in terms of specific periods of time; and the propriety of a particular procedure cannot be judged by the accountant except in terms of its effect upon the integrity of the particular statement. A mere record of purchases and sales would give an essentially correct picture for the ten- or twenty-year period. It is the emphasis upon the integrity of the particular fiscal period which gives rise to accounting. If there were no such emphasis accounting practice would degenerate to the level of a presentation of a bare diary of business events. That accounting procedure is sound, accordingly, which most nearly preserves the integrity of the statements for each fiscal period.

Finally, it should be recognized that accounting net revenue, however rationally determined, is not a true gauge of improvement in economic condition in a period of general price changes.

The accountant's yardstick, the dollar, is constantly changing. Here arises one of the serious limitations of accounting. Due to the fluctuating characters of the measuring unit employed accounting statements, unadjusted, do not constitute a reliable index of change in genuine economic well-being. Thus, in recent years, the large incomes and surpluses shown by the accounts of many businesses have represented to a considerable degree not income in the fundamental sense but the application of a less significant unit to the same or an equivalent physical volume of assets. Business income or individual income, expressed in dollars, is an inadequate gauge of true income in a period of serious price movements. A pronounced change in the value of money brings about a serious realignment of business capital and net revenue as well as individual capital and earnings. After the adoption of a satisfactory plan for the recognition of income credits and debits there still remains, then, the problem of developing a means to adjust the accountant's figures in such a way as to disclose the genuine change

in economic status. It will be sufficient here to call attention to this matter.

The problem of determining the method of measuring business income is a difficult one even under the most favorable conditions. Absolute standardization in method for all businesses cannot be hoped for, nor, in the main, is it desirable. The accountant, or the proprietor, on whom rests the responsibility for the adoption of a method of measuring income, should make his determination with a full knowledge of what any given basis involves or implies. The blind use of rule-of-thumb bases oftentimes leads to confusion and even disaster.

Accounting is not an exact science; its basic product, financial statements, is largely the result of the exercise of the best possible human judgment. Substantial accuracy and exactness are all that can be hoped for, but the accountant and the business man should have a full appreciation of the estimates and the reasons therefor in every instance entering into the accounting conclusion reached.

ACCOUNTING IN DECEDENTS' ESTATES

BY HAROLD DUDLEY GREELEY*

ARTICLE III—SOME ASPECTS OF ESTATE ASSETS

IN the February issue the subject of accounting in decedents' estates, as it is to be treated in this series of articles, was outlined, and a general description was given of the work of executors and administrators in winding up the estates of decedents. Fundamentally important terms and procedures were explained and definitions were given. In the March issue it was explained that while the law required an accounting from the representative at the termination of his administration, the form of the account was usually not specified in the law although its contents were indicated. It was explained also that while the law does not require any particular method of bookkeeping by the personal representative during his administration, it was desirable for him to maintain adequate double entry accounts, particularly in large estates.

The form of accounting in use in New York was shown and a system of accounts was suggested which would be adaptable for small estates and yet sufficiently comprehensive to meet the needs of large ones. In these two instalments it was pointed out that the executor is concerned with personal property only, except under certain unusual conditions. The personal property coming into the control of the executor is known as the estate assets and before proceeding further with this series of articles it is advisable to consider just what are assets, how

the executor discovers and obtains them, how he appraises them, how he exercises custody over them, and how he sells or otherwise disposes of the assets. In this issue attention will be called to certain interesting aspects of the questions outlined above in connection with estate assets. It should be borne in mind that what is said of an executor applies also to an administrator.

In general all personal property owned by the decedent, except such as is attached to the land or to buildings for some purpose other than trade or manufacture and fixed into the wall of the building so as to be essential to its support, constitutes assets of the estate. Such assets include money, bank bills and other circulating media, goods, wares, and merchandise, accounts receivable, furniture, cattle and provisions, and all other types of personal property. The question of what constitutes estate assets is important because assets are available for the payment of debts to creditors. Creditors, on the other hand, cannot touch personal property left by the decedent if it is not an asset of his estate within the definition of the law.

The first matter to attract attention in connection with estate assets is the provision for the widow, husband, or minor child or children. Under the policy of the law such persons are entitled to certain portions of the decedent's personal property to the exclusion of his creditors. This provision of the law is intended to provide for the immediate support of persons who were

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dependent upon the decedent. Under the New York law the following items of personal property, if in the aggregate they amount to \$500 or less in value, are not deemed assets but are exempted for the husband, widow, or minor child or children:

1. All household utensils used in and about the house
2. All musical instruments used in and about the house
3. All sewing machines used in and about the house
4. All household furniture used in and about the house
5. Fuel and provisions
6. Clothing of the deceased

In addition to the foregoing, certain other articles regardless of their value are exempted for these immediate dependent persons and are not deemed assets of the estate:

1. The family Bible, family pictures, and school books used by or in the family
2. Books not exceeding \$50 in value which are kept and used as part of the family library
3. Domestic animals with their necessary food for 60 days, not exceeding in value, however, \$150
4. Money or other personal property not exceeding in value \$150.

The last item is the exemption which can be allowed in money or other property. The law in New York does not allow the substitution of the money value for any of the articles specified in the foregoing list. Neither does it allow property of one kind to be substituted for property of equal value but of another kind specified in the list. For example, if the amount of furniture is less than the exempted total, the shortage cannot be made up with cattle. Also if there were no musical instruments or sewing machine, or like properties, the money value of them cannot be substituted in their place. In other

words, the exemptions are specific and there can be no interchange of assets in order to make up the total allowed under any one class.

With the exception of the assets set aside for the benefit of the widow, husband, or minor child or children, and with the further exception, in New York, that the widow and children are entitled to support and maintenance "out of the funds of the estate" for 40 days after the death of the husband, all other personal property left by the decedent constitutes estate assets, with certain exceptions, some of which are based upon policies of law but others upon the nature of the personal property itself.

For example, if the law allows an action for damages for causing the death of the decedent by some wrongful act, it is usually held that such damages do not constitute assets of the estate but are exclusively for the benefit of the husband, wife, or next of kin. This is very reasonably based upon the fact that the cause of action did not exist at the date of death. Consequently the creditors of the estate cannot touch the money recovered as such damages because that money is not an asset of the estate. Another example of money collected by the executor which does not constitute an estate asset is the amount of life insurance where the policy insures to the benefit of the widow, or of children if she predeceases the decedent, provided the premium was not in excess of \$500 per year. The amount of life insurance purchased by premiums in excess of \$500 constitutes an estate asset for the benefit of creditors. Sometimes the law takes into consideration the nature of the personal property itself and decides whether or not it shall constitute an estate asset. For example, it has been held that private letters found among the effects of the decedent are

not estate assets. In that case the letters were by George Washington to his secretary. Generally speaking, however, all personal property not exempted under the statute noted above constitutes estate assets.

II

In passing it is interesting to note that an action for causing the death of the testator by a wrongful act abates or ceases to exist upon the death of the wrongdoer. It cannot therefore be maintained against his executor or administrator if he dies before judgment has been secured against him. This is an old rule of the common law and has been changed in many states but it has not been changed in New York. It is obvious that this hard and fast rule of law works an injustice in many cases. There is, of course, no logical reason for denying the executor of any person who has been killed by the wrongful act of another any right against the estate of that other person who has died leaving assets.

In determining whether personal property is an asset of the estate the law will seek to work substantial justice rather than to be limited by technicalities. In one case the executor found among his decedent's effects a note due from another person. In order to avoid the payment of the transfer tax, to which reference will be made in a succeeding issue, the executor destroyed this note and took a new one from the same debtor made out to him in his individual name. The court held that notwithstanding this subterfuge, the note made out to the executor individually was an asset of the estate in place of the one which he had destroyed. There are, however, some very close cases where there is room for a reasonable difference of opinion as to whether or not a particular piece of

personal property constitutes an estate asset.

In one case a note was taken jointly by a husband and wife although the entire consideration for the note was paid by the husband. The court held that upon his death the note became the property of the wife and was not an estate asset. It was pointed out that the only way to avoid this result was to find that a legacy had been left by the husband to his wife in lieu of her interest in this note. The subject of legacies will be considered in a subsequent issue. As explained in the February issue they are gifts of personal property by will.

As a general rule any right which the decedent could enforce by an action at law and which by statute survives his death, passes to his executor and can be enforced by the executor to the same extent that the decedent could have enforced it had he lived. A curious case, however, recently arose in Louisiana. In that case a woman firmly believed in a family tradition that an ancestral pot of gold was buried in the neighborhood. She consulted a fortune-teller who gave her a map showing her where the pot of gold was hidden and she began to dig for it. As a practical joke certain persons filled a pail with dirt and hid it where she must necessarily find it in her digging. She found the pail and opened it with much ceremony in the presence of all of her family. When she discovered the joke she commenced an action against the persons who buried the pail, for her financial outlay in the digging and for her mental disappointment and anguish over her failure to find the pot of gold. Before she completed her action she died and her personal representatives continued the action. The court held that the defendants had exceeded all social license in their practical joking and that had the plaintiff lived she

would have been given a substantial sum of money as damages. But the court held that in this case since the plaintiff had died her estate could recover only a comparatively small sum. This would seem to be very bad law. If the action survived at all, the amount of money which the plaintiff could have secured should have been given to her representatives who carried on the action by virtue of a statute which made the cause of action survive. The representatives should have secured all that the plaintiff could have secured or else nothing at all.

III

In connection with what constitutes estate assets that subject of law known as equitable conversion must necessarily be considered. Equitable conversion means a change of real property to personal property, or vice versa, not actually taking place but presumed to exist by construction or intendment of law. Money directed to be invested in land and land directed to be sold and turned into money are to be considered as that species of property into which they are directed to be converted, although the conversion may not actually have taken place. The direction of the owner of the property to make the conversion may be by will, by contract, by marriage contract, by settlement, or in any other way. In order to protect the rights of all parties in interest, it is sometimes necessary to regard property as subject to the rules applicable to it in its changed form and not in its original state, although the change may not actually have taken place. The conversion is said to have been consummated in order to work an equitable distribution of the property, although the actual conversion had not occurred. It is seldom that personal property is thus

regarded as converted into realty, but the equitable conversion of real property into personal is an every-day occurrence and has led to almost innumerable decisions.

The leading case on this subject is an English one wherein a man devised real estate to trustees to sell it after his widow's death and divide the proceeds between his son and daughter. The son and daughter died before the widow who became their next of kin and thus entitled to the property if it was considered personal property. The widow died and after her death an heir of the son claimed the land as real property. The personal representative of the widow was awarded the land on the ground that it had been equitably converted into personal property.

In a recent New York case a man living in North Dakota contracted to sell land in New York State, the purchaser to take possession paying in installments and to take title upon the full payment of the contract price. The man in North Dakota who contracted to sell the land died before the purchase price was paid in full. The court held substantially that there had been an equitable conversion in this case and that all that the deceased left was a claim against the purchaser for the purchase money. It was held that the land was not subject to the New York State transfer tax as being property within the state left by the deceased vendor. The right of action against the New York purchaser was not the kind of property which could be taxed under the New York State transfer tax law.

In another somewhat similar New York case in 1919 certain land was needed for railroad purposes and thus was condemned under public condemnation proceedings. The owner accepted the report of the condemnation commissioners which fixed the amount

of money due to him, but before he received the money, he died. The court held that the damages awarded to the owner of the land which was taken in the condemnation proceedings, belonged to his personal representatives and constituted estate assets subject to creditors' claims. In this case while the title to the land remained in the owner, it was held that the only property which he left upon his death was the claim against the railroad for damages.

It may be stated as a general rule that contracts to sell real estate are assets of the estate and the amount of the purchase money contracted to be collected, constitutes an estate asset which the executor should collect. Under the common law the heir to whom the land descended upon the death of the deceased contracting vendor, could be compelled to pass title to the contracting purchaser who would pay the purchase price to the executor for the benefit of the personal estate of the deceased. Under the law in New York, the executor or administrator may make the deed, having his action confirmed by the surrogate. On the other hand, contracts for the purchase of property left by the deceased constitute debts against the estate which the executor must pay. In those cases the land when it is acquired passes to the persons who get the deceased's real property, and the purchase price becomes payable as a debt of the decedent. The subject of debts and their payment will be discussed in a subsequent number.

IV

Immediately upon his appointment the executor should proceed to collect all of the assets of the estate about which he has any knowledge, taking them into his actual custody so that he may preserve them for the benefit of

the estate. If he fails to reduce an asset to his possession he may be liable personally if the asset is lost or destroyed or damaged. The law assists the executor in every way to collect the estate assets. If he believes that certain persons have property belonging to the decedent which would constitute estate assets but those persons refuse to deliver the property to him, he may institute what are known as discovery proceedings. He does this by filing a petition asking that an inquiry be made for such property and that the person who he thinks has possession of the property be required to attend a hearing and be examined concerning it. This relief is not limited to cases where the person is believed to have actual possession of property left by the decedent. It is used also in those cases where certain persons have or are thought to have knowledge or information concerning personal property of the deceased. Discovery proceedings, however, cannot be used to enforce the payment of a debt. The only purpose of them is to assist the executor in reducing to his possession actual tangible property left by the deceased but in the possession or in the knowledge or information of some other person whose duty it is to deliver it to the executor.

While an executor generally is bound by law to take all the necessary steps to reduce estate assets to his possession and custody, he will not be held personally responsible if he fails to do that when he has reasonable grounds for believing assets to be worthless. For example, he will not be charged personally if he fails to collect a debt where the debtor is hopelessly insolvent or where the debtor denies the claim and the executor cannot find any possible way of proving the case against the debtor. But the general rule is that the executor has the burden of proving

the worthlessness of such assets and he should be prepared to show the steps taken to ascertain whether or not the claims are collectible and should seek legal advice in every case.

When the executor has collected all of the estate assets he should prepare an inventory of them and have them appraised with a value in dollars and cents. As pointed out in the February installment the law in New York State permits the executor to have appraisers appointed by the surrogate for the purpose of appraising the assets, although it does not require him to take such steps. As a matter of fact the appraisal made by the New York State transfer tax assessor is regarded as sufficient and most executors are content to do nothing more in the way of inventorying and appraising. In the preparation of the executor's inventory all property left by the deceased must be included whether or not it constitutes estate assets.

Property exempted for the benefit of the husband, widow, or minor child or children, as explained in a preceding paragraph, should be listed in the inventory and identified as having been set aside as that exemption. The inventory does not include real estate because that does not constitute an estate asset. If it can be reached by the executor at all it is only under unusual conditions; as, for example, where the assets are inadequate to pay the debts. Inventories should make no mention of debts due by the decedent for the reason that there is no way of ascertaining such debts except by advertisement. The process of ascertaining the decedent's debts and the method of paying them will be discussed later.

In the matter of actually fixing the appraised value of an estate asset, the executor is charged with no duty and should assume very little responsibility.

He should leave the appraisal to the official appraisers, but he should be able to criticize them if their valuation appears to him to be too low. On the other hand, if he believes the figures of the appraisers to be too high, he should apply to the court for their modification in order to avoid *prima facie* evidence of a value higher, perhaps, than he could hope to obtain upon his realization of the assets. Consequently, the executor should be familiar with the general principles underlying the valuation of estate assets.

V

Certain assets of the estate are very difficult to appraise in dollars and cents and the most notable and common of these is the interest in a former partnership left by a decedent. Under the law of partnership a firm is dissolved by the death of one of its members. The title to the firm property passes to the surviving partner or partners and they are charged with the duty of winding up the affairs of the firm and accounting to the executor of the deceased partner. In the absence of anything in the partnership contract covering the event of death, the executor of the deceased partner has no right whatever to direct the management of the partnership business, but his interest is confined solely to the right to an accounting from the surviving partners. It is exceedingly difficult to place a valuation in dollars and cents upon this right to an accounting.

The difficulty in valuing the executor's right to an accounting results from several complications. In the first place the amount due to the estate of the deceased partner cannot be determined without closing the books of the firm as of the date of death. This involves for one thing the calculation of the profit or loss up to that date since

the last preceding balancing of the firm books. When death occurs at an odd date such as May 7, or October 21, which is in the middle of a month and not at the end of an accounting period, a considerable amount of work is involved in calculating the income and expense up to the date of death.

Another matter of difficulty in this valuation in the absence of a specific agreement among the partners concerning it, is the valuation of the decedent's interest in the good-will of the firm. Good-will, briefly, is the probability that the old customers will continue to patronize the business. While good-will should not be set up by the partnership as an asset unless it actually cost something, nevertheless upon the death of a partner, the decedent's estate may be entitled to some compensation for its interest in the good-will. This matter is further complicated by the fact that the death of the decedent may have had an adverse effect upon the good-will itself. This would follow in those cases where the personality of the decedent or his ability was such that it brought business to the firm or materially assisted in the firm's rendering the service to its customers upon which its good-will was based. As a practical matter it takes a considerable amount of time in a partnership of any size to determine the value of the decedent's interest in the dissolved firm and because this right of the decedent's executor to the accounting by the surviving partners is so difficult to value in advance, the law allows the executor to state this right in his inventory as one with an unascertained balance.

VI

Other assets less commonly found may be very difficult to value. Sometimes the difficulty of valuation de-

pends upon the more or less personal characteristic of the asset itself. A church pew would fall into this classification. A cemetery lot owned by the decedent might be one difficult to appraise. Copyrights also may be of uncertain value. Since the eighteenth amendment to the Constitution of the United States and the legislation designed to enforce it, the valuation of contraband property left by the decedent, such, for example, as whiskey, presents many points of difficulty. On all of these questions the opinion of the appraisers should be accepted by the executor, unless he has some reasonable grounds for establishing his belief that the appraisal is too low.

One asset at least can usually be valued by a mathematical process upon which the executor may reasonably insist if the appraisers are inclined to use a rough and ready guess as to its value. That asset is an estate for years left by the decedent in property of which he was a tenant and which he had sublet at a profit. Suppose, for example, that the testator had hired property for 20 years agreeing to pay the taxes and to make all repairs and to pay a fixed rental to his landlord. Assume also that the landlord agreed to pay to the decedent at the termination of the lease a fixed sum of money to cover the cost of permanent improvements made by the tenant. If during his lifetime the deceased tenant had sublet the property at an increased rental, at the date of his death he has left an asset consisting of the right to collect from the subtenant which can be valued by more or less actuarial methods.

The first step would be to estimate what the average taxes, insurance, repairs and other expenses will amount to during the remaining term of the lease and to add them to the rent to be paid to the landlord in order to deter-

mine the average cost of maintaining the property during those years. By deducting that total from the amount to be received from the subtenant, the net income on the property will be determined. This net income will constitute an annuity for the remaining term of the lease and this should be valued in the ordinary way of valuing annuities. In addition to the right to receive this annuity the estate possesses the right to receive the principal sum agreed to be paid by the landlord for improvements upon the termination of the lease. This latter right should be valued at its present worth as of the date of death. Combining the valuations of these two elements, gives the total valuation of the property.

In connection with the preparation of an inventory the question is usually raised whether or not accrued interest on bonds and other claims receivable by the estate should be included in the inventory. Interest accrues from day to day, and that portion of it which had accrued up to the date of death constitutes a part of the principal of the estate and would be taxed by the transfer tax appraiser, and must be accounted for by the executor as a part of the estate. In the inventory, however, it is generally not necessary to include the accrued items. It is sufficient to charge the executor with the bonds or other securities or claims, leaving him to prorate the first income collections as between principal and income. Upon such collection the executor must be careful to credit the principal of the estate with the portion of the income which had accrued up to the date of death. The matter of accruals will be discussed in a subsequent number.

VII

The general principle regarding the custody by the executor of estate assets

is that he must exercise such care over them as an ordinarily prudent and reasonable man would exercise over similar property of like nature belonging to him personally. He is not an insurer of the estate assets, but he will be held personally responsible if he fails to exercise the kind of care which the law specifies.

One fundamental requirement concerning the care of estate assets which is frequently overlooked by executors is that estate assets must be kept from all other property. Many executors, particularly in small estates, would be surprised if they knew that they were guilty of committing a crime when they mix estate funds with their own personal funds. All bank accounts, all storage in warehouses, and all estate transactions must be conducted in the name of the estate and not by the executor in his individual name. Too great emphasis cannot be laid upon the fact that an executor who deposits estate funds in his own account is not only guilty of a misdemeanor, which is a crime, but he also runs an excellent chance of misappropriating estate funds through carelessness. An executor must never under any circumstances use estate funds for the payment of personal bills of his own. He must not, for example, pay himself any money on account of his commissions. As will be explained later his commissions are fixed upon the final accounting and until that time he has no claim for any part of them. While the theory of his commissions is that half of them are for receiving the property and half for distributing it, he is not justified in paying himself any part in advance of the fixing of the commissions by the surrogate upon the accounting. Where there are two or more co-executors or co-administrators questions frequently arise among them as to the custody of assets. All such questions should be

referred to the court who will issue an order directing the proper distribution.

If the executor exercises reasonable care in the custody of the estate assets he will not be personally responsible for loss through burglary. If, for example, cash belonging to the estate was collected after banking hours and placed by the executor in his own safe along with cash of his own, but marked for identification by being placed in a separate envelope, he will not be responsible for the loss of the estate cash if his safe was robbed and his own money and the estate money taken. He might be held liable, however, if he had placed the estate money in his desk although his own money was placed in his safe, or if he had failed to deposit the estate money in the bank had it been received in time. If he deposits estate funds in a bank account in his own name, he will be personally responsible for them if the bank fails regardless of the care exercised in selecting the bank.

Under the law in New York the executor may sell the personal property of the decedent for the payment of debts or legacies or for making distribution. He should not sell, however, unless it is necessary and in all cases of doubt he should refer the matter to the surrogate and obtain a written order directing him to make the sale. The sale may be either public or private and may be on credit not to exceed one year, provided approved security is taken for the account receivable. Articles which are necessary for the support of the family and articles which are specifically bequeathed, that is, those which are specifically given to some legatee by the will, must not be sold except as a last resort.

VIII

Personal property left by the decedent such as jewelry, books, pictures,

furniture, clothing and other personal effects, can usually not be sold except at a loss. Further, such assets generally have a sentimental interest for the legatees. Accordingly, when the legatees can be made to agree upon the distribution of those assets, they should be given to legatees in lieu of money. If, however, a disagreement among the legatees arises concerning the disposition of such assets, the matter should be referred to the court which will order the sale of the assets if it cannot induce the legatees to agree among themselves.

The executor should bear in mind the fact that he represents the creditors as well as the legatees and he should remember that legacies are not payable until one year after the letters have been issued to him. If he distributes assets before that time he may be personally responsible to creditors, and, further, if he withdraws from the estate for distribution to a legatee an asset which is earning income, he may be personally charged with the loss of income which results. The test of what is reasonable for the executor to do must be made in each case on the facts involved.

Testators will frequently leave directions concerning what they regard as the proper handling of their property after their death. Such directions are usually in the form of memoranda left together with the will to be given to the executor. As they are not part of the will they are not binding upon the executor but he should use his judgment in carrying out the testator's directions. For example, if the testator leaves a note for his executor stating that in his judgment certain stock should be held for at least two years because a dividend may be expected within that time, the court will pay some attention to this direction but will not release the executor from the

exercise of good business judgment in disposing of the stock.

The executor must convert the personal assets of the estate into cash within a reasonable time, but what is a reasonable time depends upon the circumstances in each case. As a general rule eighteen months from the date of the issue of the letters is regarded as a sort of standard time. If the executor does not convert assets into cash within what the court regards as a reasonable time, he may be held personally responsible for any depreciation that results from the delay. If the executor fails to dispose of a security within a reasonable time, he may be held personally responsible not only for a loss of the principal, but also for interest at the rate of 6 per cent per annum on the amount of cash which he would have secured had he disposed of the assets within that time. "Legal" securities left by a decedent, i.e., those securities in which a savings bank is authorized by the Banking Law of New York to invest, need not be sold by an executor unless a sale is necessary for the payment of debts or legacies. If a loss in such securities should occur, the executor would not be liable in the absence of gross carelessness or neglect.

As explained in the March installment, the bookkeeping required in the handling of assets is to open an asset account for each one or for each kind if there are several units of one sort, and to charge those asset accounts with the inventory values. The offsetting credit is to a proprietary account known as estate. When assets are given to legatees a personal account with each legatee should be charged with the inventory

value of the assets. Upon the closing of the estate books the balance in the estate account, reduced by all expenses applicable to the principal of the estate, is distributed to the various legatees' accounts. The balance, if any, then due to each legatee, consisting of the excess of his legacy over the value of assets and other cash given to him, is payable ordinarily after the final accounting by the executor and in accordance with the decree of distribution issued by the court.

The subject of estate assets as covered by this article may be summarized as follows. In general all personal property left by the decedent as distinguished from the real property constitutes estate assets and must be accounted for to the persons entitled to the principal of the estate. Certain articles are, however, exempted for the personal use of the immediate family of the decedent and these do not constitute estate assets. The executor immediately upon his appointment must reduce all assets to his possession and control, have them inventoried and appraised, and preserve them in his custody in accordance with the general principles of law. If necessary assets may be sold for the payment of debts and for the payment of funeral expenses and expenses of administration, or they may be distributed to legatees. The executor should very carefully account exactly for all of them and should preserve them while they are in his custody entirely separate and apart from any other assets belonging to him personally or to any other trust fund or estate under his control.

PROBLEMS FOR THE BUSINESS EXECUTIVE

ACCOUNTING PROBLEMS

BY HAROLD DUDLEY GREELEY

A SYSTEM of accounts for general building contractors was outlined in *Administration* for February, the distinctive feature of which was a cost analysis book to facilitate the preparation of prompt and accurate statements. The method of keeping the accounts proposed there, was unusual but it accomplished its purpose, which, after all, is the object of account-keeping. When an orthodox manner of account-keeping does not supply the executive with the information that he needs for administrative control in time to be of use to him, that method should be forgotten and the practice so changed as to produce, if possible, the results desired. Mere form and custom in the keeping of accounts should never be allowed to get in the way of a change which will make those accounts of more practical use to the administrative heads of the business for whose purpose accounts are kept.

Another somewhat unusual situation in a business manufacturing gases was met by another irregular, so to speak, system. This business manufactured oxygen, hydrogen, and nitrous oxide, and dealt in inhalers and other accessories used in connection with medical oxygen. There were two troublesome problems in the accounting department. One concerned the determination of cost and the other the preparation of monthly statements. In the former the chief difficulty, as usual, was in the classifying, grouping, and distributing of overhead expenses; in the latter the difficulty was in getting the monthly statements to agree with the ledger accounts.

It is obvious that detached statements which cannot be proved by the accounts upon which they are based are not entitled to full confidence. While this was recognized, it was difficult to get statements into agreement with the ledger because they contained items like inventories and deferred charges which did not appear upon

the books, and they also distributed over the various products certain expense accounts which appeared upon the books in total. The latter problem was attacked first because it was felt that some sort of definite statement should be produced which could later be polished from time to time, whereas if all of the time were spent in seeking the ideal distribution of overhead items, neither exact costs nor monthly statements would be produced, with the result that little would be accomplished. It was found that in the solution of the problem of the monthly statements many of the difficulties of the cost problem disappeared.

The general ledger in this business had approximately 130 accounts and differences were frequent. There were four accounts receivable ledgers each with a controlling account in the general ledger and there was a voucher register controlled in the same way. Notwithstanding the fact that each of these books would be in agreement with its controlling account, the general ledger, nevertheless, would be out of balance due to carelessness, and it was a constant source of delay and annoyance. The manager of this business liked to regard his trial balance as a monthly statement and he used the trial balance book for examining the operations of the preceding month. The trial balance, however, gave him little useful information because the accounts were too numerous, and frequently as accounts were added it was necessary to put them on unused pages which destroyed the logical arrangement of the accounts and made the preparation of subtotals on the trial balance very difficult.

The first step in the change of the system was to do away with the bound ledger with its conventional two-column ruling. In place of it there was substituted a loose-leaf ledger with twelve-column sheets. By using analyzed ledger accounts and by certain monthly closings and transfers, the

130 accounts in the general ledger were reduced by 100 and there was a trial balance of approximately 30 balances at the end of each month. This made the trial balance a statement of convenient length and the use of the loose-leaf sheets made it possible to preserve the logical order of arrangement. A copy of the new trial balance then became of practical use as a current monthly statement of assets and of operations.

II

For each of the main groups of balances appearing upon a balance sheet an analyzed ledger account was used in the ledger. There was one page or account for fixed assets the total of which appeared in the first money column. Succeeding columns across the page were used for the detailed assets such as good-will, patents, building improvements, plant equipment, office furniture and fixtures, factory furniture and fixtures, and auto trucks. Thus seven accounts were made into one. When an entry was necessary affecting any of these seven different accounts the item was posted in the total column and in the respective sub-column, so that the total column showed the balance of all the fixed assets and the subsidiary columns showed the analysis of the fixed assets by individual items, the total of which, of course, cross-footed to the total of the main column. Occasional credits in these accounts were entered in red.

Other balance sheet items were handled in the same way. There was one analyzed account for deferred charges and accrued items, the subsidiary columns of which took care of prepaid insurance, accrued interest on investments, deferred taxes, and prepaid advertising. Another analyzed account provided for the finished goods inventory, subsidiary columns taking care of nitrous oxide, medical oxygen, commercial oxygen, hydrogen, inhalers, accessories, and nitrogen. There was one analyzed account for depreciation reserves, with subsidiary columns showing the reserve applicable to each item such as plant equipment, factory furniture and fixtures, office furniture and fixtures, high pressure cylinders, low pressure cylinders, and auto trucks.

The expense accounts were grouped and handled in the same way. For example, there was one account for factory expenses, showing in subsidiary columns the expense, supplies, repairs, wages, rent, light, insurance, and water rent. Another analyzed account took care of selling expense by showing in addition to the total the amount of salesmen's salaries and expense, advertising, and lost and condemned cylinders. Delivery expenses were grouped and the total was analyzed into truck operation, wages, expense, and insurance, the truck operation account taking care of gas, oil, and other incidental expenses of like nature. The largest group of expense accounts was known as general expense and columns provided for officers' salaries, office salaries, office expense, printing and stationery, telephone and telegraph, rent, light, taxes, building repairs, postage, and miscellaneous items. The capital expenses were grouped with subsidiary columns for discount on sales, interest expense, and exchange, and capital income items were similarly grouped to show in subsidiary columns the discount on purchases, interest income, and interest on bank balances.

The most distinctive feature of the system, however, was the providing for each product of three main analyzed accounts, one to show the cost of goods manufactured, one to show the selling expense, and one to show the profit or loss on the product. The balance of the manufacturing account and the balance of the selling account were closed into the profit and loss account so that the latter was the only item for each product appearing in the monthly trial balance. These accounts were so analyzed that the monthly statement consisted merely of copies of the totals shown by the various columns. There ceased to be any difficulty in reconciling the monthly statements with the ledger because the statements were merely copies of figures already appearing in the ledger and all delay in the preparation of statements was obviated, because the statements were practically prepared in order to get the trial balance at the close of the month. All expense accounts were eliminated by their distribution over the products, resulting in a substantial reduction in the number of accounts.

III

The account for the cost of manufacturing commercial oxygen contained the following columns:

1. Net cost
2. Transfer to medical oxygen
3. Total debit
4. Compression
5. Production
6. Direct labor
7. Maintenance
8. Miscellaneous expense and supplies
9. Depreciation

The column to record the transfer to medical oxygen was necessary because medical oxygen differed from commercial oxygen, principally in its compression and in the size of cylinder used. In order to get the total cost of commercial oxygen produced, the quantity of such oxygen used for medical oxygen containers must necessarily be deducted. Thus the amount of column showing the net cost of commercial oxygen manufactured was obtained by deducting the total of column 2 from the total of column 3 which represented the total cost of all oxygen manufactured. Each of the subsidiary columns, showing for example, the cost of compression and production and the other elements of cost, represented a ledger account. No raw material was involved in this process because electrolysis was used and thus the total cost of goods manufactured was easily obtained by the total of column 3 which was proved by the cross-footing of the totals of the other subsidiary columns. Items were entered in these columns from the books of original entry in just the same way as if each column had been a ledger account standing by itself in the general ledger. Occasional credit items were entered in red.

The selling expense account for nitrous oxide was typical of all of those accounts. In that account the first column showed the total debit and there were subsidiary columns for delivery wages, delivery expense, truck expenses, insurance, salesmen's salaries and expense, advertising, lost and condemned cylinders, and cylinder maintenance. The totals of the selling expense account, kept as previously explained, were transferred to appropriate columns in the

selling expense account for each product. Similar treatment was followed with the factory expense account and delivery expense account as maintained in their analyzed form. The totals of the selling expense account and of the cost of goods manufactured account were transferred at the end of the month to the operating profit account for each product.

IV

The account showing the profit or loss for each product was in analyzed form and provided for the opening and closing inventory. That account for nitrous oxide contained the following columns:

1. Sales
2. Return sales
3. Net sales
4. Inventory end of month
5. Total
6. Inventory beginning of month
7. Cost of goods manufactured
8. Selling expense
9. General expense
10. Total
11. Profit or loss balance

It will be seen that columns 1 to 5 represent practically the credit side of a ledger account showing the trading or profit and loss on the product. Columns 6 to 10 inclusive are practically the debit side of such an account, and the balance is determined, of course, by comparing the total of column 5 with the total of column 10. The credit columns were placed first in the analyzed ledger account to facilitate subtraction. The entries for sales and return sales were posted from the sales books of original entry and the inventories at the beginning and end of the month were journalized. The figures for the cost of goods manufactured and for selling expense were transferred to this Profit and Loss account from the analyzed accounts showing these items in detail as previously explained. The figure for the general expense element was the total of the General Expense account kept in analyzed form as noted above. For each product, the only item appearing in the trial balance was the profit or loss on the sale of it during the month.

By journalizing the inventory, the inventory on hand at the end of each month was carried in an inventory account in the ledger which was classified by analysis columns in the same way as the other analyzed accounts. It is apparent that the only work required in the preparation of a monthly statement was to make a copy or transcript of the columns appearing in the ledger. As soon as the ledger was in balance the figures for the monthly statements were available.

In order to carry this plan into operation it was necessary to distribute all of the expenses and thus the cost problem referred to above was settled incidentally. Each item of expense was studied in detail and if it was found to apply to a particular product, it was so treated. If it could not be made to apply to a particular product it was grouped with other expense items of like kind and the total of the group distributed upon what seemed to be the fairest basis in view of all the facts. To guard against making the figures support preconceived ideas of the management, all bases of distribution were determined in advance, absolutely without regard to their effect upon the profit or loss result for any one product. The first monthly statement showed a considerable number of unexpected profits and losses. Certain products which were thought to be profitable were discovered to be unprofitable, and vice versa. The net result for each product was very carefully examined and the correctness of the distribution bases was determined.

V

As the distribution of expense items for factory, selling, and general administration was made at the end of each month, it was possible to take into account all unusual conditions during the month. For example, during the influenza epidemic there was an unusual demand for one of the products with the result that items like delivery expense were largely exceeded on that product. While care was taken not to change the bases of distribution merely in order to have the figures conform with preconceived ideas, any material change in the manufacturing process or in business conditions

during the month was taken into account in making the monthly distribution.

While this plan of accounting was somewhat unique in that it did not follow the prescribed forms and rulings or the usual procedure in commercial accounting, it met the particular needs of that particular problem. It reduced the number of ledger accounts from 130 to 30, and it facilitated the preparation of monthly reports by having the information needed in those reports form an integral part of the accounts themselves. Under this system it was possible at any time to secure a complete analysis of the detail of any one of the items appearing in the cost and thus the monthly statement appeared in what is considered to be about the best form for such statement, namely, summarized totals capable of analysis to the minutest detail if such analysis was needed.

Since the last issue a number of inquiries from readers have been received suggesting topics for discussion in this department. One of them stated the following problem which appeared in a wholesale dry-goods business. In that business at the end of each fiscal period a considerable quantity of packing material, such as rope and cardboard boxes used in making shipments, and printing and stationery used in the office, remained on hand. In order to determine the correct costs for the period it was obvious that the expense accounts for these materials should be given credit for the unused portion of them. The only point in dispute concerned the treatment of the offsetting debits. On the one hand it was contended that these unused supplies should be brought down as inventories and presumably stated as inventories on the balance sheet. The other contention was that these items should be regarded as deferred charges and with that opinion we are inclined to agree.

The net profit or loss for the fiscal period would be the same regardless of the method adopted, but the question becomes one of importance when the balance sheet is considered. Inventories are regarded as current assets because they come within the definition of current assets as cash or any other asset which in the ordinary course of business *will* be converted into cash.

Consequently inventories should include only the stock of merchandise or goods in which the business deals. In the ordinary course of business the packing supplies and the printing and stationery supplies will not be converted into cash. The test is not whether they *can* be converted into cash, but whether in the ordinary course of business they *will* be so converted. If the test were whether or not an asset can be converted into cash, practically every fixed asset would become a current one.

VI

The importance of a proper conception of what are current assets is apparent when one prepares a balance sheet for the purpose of securing a loan. Perhaps the most important single inquiry from such a balance sheet is the ratio between current assets and current liabilities, in order to determine whether the business has on hand sufficient cash, together with that which it is expected will be received in the ordinary course of business with which to meet current liabilities. A current liability is generally regarded as one which will mature within one year. If the current assets include items which in the ordinary course of business will not be converted into cash, the value of this comparison is destroyed. Consequently, items such as unused supplies, prepaid insurance, and the like, are preferably shown as deferred charges. That is to say, they are expenditures the charging of which will be deferred until some subsequent period.

In this connection a reference to working capital may be in order. As generally used, working capital does not refer to the current or working assets, but refers to the excess of current assets over current liabilities. Just as capital is the excess of all assets over all liabilities, so working capital is the excess of current assets over current liabilities. It shows the amount of the investment by the proprietors which is available for the current operation of the business, as distinguished from that part of the investment which is represented by fixed assets, or, more exactly, by the excess of fixed assets over fixed liabilities. When important, this distinction can be forcibly shown by the

preparation of a double account balance sheet. In that form commonly used by certain of our railroads the balance sheet is divided into two sections, one dealing with the current assets and liabilities and the other with the fixed assets and liabilities. From the economist's point of view capital may consist of the total assets, at least those which represent what he calls wealth, but from the accounting or business point of view capital is generally taken to be the ownership or proprietorship of the business. In other words, it is the amount for which the business is accountable to the proprietor who, of course, ranks after the creditors.

Another communication received during the month called attention to the lack of uniformity in accounting terminology and in the form of accounting statements. The writer of it listed thirteen items commonly found in statements of profit and loss and said that he had recently examined five such statements from different companies and that these statements did not agree on more than three of the items listed. He suggested that some attention be paid in this department to the desirability of uniformity so that comparisons might be made among statements of businesses on a comparable footing.

VII

Standardization or uniformity in terminology and forms of statements really amounts to the adoption of a common language in which all who speak of financial transactions may converse. It is obvious that when persons use words with different meanings or shades of meanings, it is necessary to translate the words used so that they may be understood in the terminology of the hearer. When we complicate the situation by having almost as many shades of meaning as there are users, it becomes very difficult for persons interested in a common cause to reach a common basis of understanding. The importance of this has been realized for a long time and many of the professional societies are endeavoring through committees on standardization to propose some uniform terminology and method of procedure which will be acceptable to the majority of users.

It is evident that no one committee, and much less no one person, can by their *ipse dixit* fix upon terminology or forms of statements which can be made compulsory. Even in the practice of law where there is a court to decide mooted questions, exact terminology is difficult; in commercial usage where there is no court to which appeal can be made, absolute uniformity is manifestly impossible of attainment. It is in the interest of all users of language, however, to employ words which have meanings understood by other users. If most of us could agree upon the meaning of the words which we use many of our misunderstandings and some of our litigation could be avoided. When, for example, a man refers to his stock we ought to be able to know at once whether he means his stock of merchandise or his capital stock.

In view of the excellent work which is being done by the various committees on standardization, it is with some temerity that the subject is approached in this department. It is believed, however, that if suggestions concerning the meaning of words in commercial usage be made, sufficient interest will be aroused to induce correspondence from readers which will necessarily contain helpful suggestions, either by way of criticism or by way of amplification. It is only by the widest co-operation that any movement toward uniformity or standardization can accomplish anything more than recording the mere opinion of the person who advances the idea. We would like to see this department a sort of crucible in which the raw ideas of many could be put and from which there might come a fairly well-refined terminology. It is with that desire in mind that the following terms and practices are discussed.

One of the items concerning which there is diversity in usage is outward freight and cartage. Under what seem to be exactly similar circumstances this item is sometimes deducted from the sales and sometimes it is stated as a selling expense. First of all it would seem necessary to decide whether or not selling expenses should include delivery expenses. In a small business these two kinds of expenses might well be consolidated, but in a large business frequently it is desirable to know how much it costs to

secure the orders, in other words, actually to sell the goods, as distinguished from what it costs to deliver the goods after they have been sold. Where that separation of expense items is desirable a convenient form of presenting them is to show the details of each with a separate subtotal, the two subtotals being added to show a grand total under a caption such as selling and delivery expense. If that plan be adopted the outward freight and cartage would belong with the delivery expenses, unless it is a proper deduction from sales, and that raises the main question under review.

The decision of this question would seem to turn partly upon a question of fact. If the selling price were f. o. b. factory and a larger selling price were charged when the sale was f. o. b. purchaser's office, it may fairly be inferred that the selling price includes the outward freight and cartage. In that event it would be proper to deduct that item from the sales. When, however, one uniform selling price is made regardless of the point of delivery it is believed that outward freight and cartage should be shown as a delivery expense and not as a deduction from sales. As the delivery expense would vary with the sales according to territory the full significance of the figure showing the total sales for the fiscal period would be somewhat obscured by the deduction of these various delivery charges. It is believed preferable to show outward freight and cartage as a delivery expense in the absence of the clearest kind of evidence that the selling price included a charge for that expense.

It is understood, of course, that a specific charge to a customer for freight should not appear among the sales credits at all. Such charges to the customer should appear as credits in a freight outward account, which account would be debited with the payments to the railroad or express company for the cost of the service. Under those circumstances the freight outward account would normally have no balance. If it were found to have a balance, due to an error or due to a mistake in shipping goods collect which should have been sent prepaid, the balance of the account should be carried forward as a deferred debit or as a deferred credit. Where it is customary to

charge freight to a customer the sales register or other book of original entry for sales should contain a column in which the freight charges could be entered, so that the total might be credited at the end of the month or other fiscal period to the freight outward account.

VIII

Another item in the list referred to in a preceding paragraph was shipping department expense. That expense presumably includes the wages of packing clerks, shipping clerks, and checkers, the cost of packing supplies, any other direct charges, and a proper portion of overhead items such as rent and insurance. It is assumed that the shipping department expense would not include the putting of the product into containers when the product was such that it could not be sold without the containers. Under such circumstances the expense of packing would be a manufacturing one.

If the shipping department expense includes the cost of delivering merchandise which has actually been sold, its treatment would seem to be similar to that for outward freight and cartage. It would be very unusual, however, to find the charge to the customer appreciably increased to cover such expenses. For that reason there would scarcely be a case when such cartage could be deducted from the sales. As noted above, in a large business frequently it is desirable to show all of the delivery expenses, of which the shipping department expense would be one, separately from the pure selling expenses, which is to say the cost of obtaining the orders or actually making the sales.

Among the items listed was one which can be greeted as an old friend. That is the troublesome question of cash discount, which almost invariably presents itself in any business. Should cash discounts be deducted from the cost of purchases and sales, or should they be treated as items of capital income and expense? So much has been written on this subject that it seems scarcely necessary to discuss it. Sufficient emphasis, however, is not always placed on one point and that is the necessity of determining in the first instance whether the

discount is actually a cash one or a trade discount. The test would seem to be whether under the custom in the particular industry the cash discount would be lost if payment were not made in the prescribed time.

Merely calling a discount a cash one does not necessarily make it so, and if according to the custom in the particular trade the discount would be allowed even though payment were not made within the prescribed time, the discount is actually a trade discount. The amount of the discount, that is to say the rate of it, can scarcely ever be the deciding factor; for example, a 7 per cent discount is sometimes a trade discount and sometimes a cash discount. Trade discounts, being merely adjustments of list or catalogue prices, should not appear in the accounts at all. They are merely the means of determining the selling price as a matter of bargain and sale between the vendor and the vendee. Cash discounts, however, should appear and the question in connection with them was stated above.

It is hard to convince the average merchant that his goods cost him more than he actually paid for them, or that his sales produced more than he actually collected from his customers. Nevertheless, when such a person is in charge of the merchandising end of the business with no responsibility for the financial, or vice versa, he is the first one to object to being charged with expense items over which he has no control. As a matter of principle, the subject should be treated the same way whether one person is in charge of the entire business or in charge of only one part of it.

The object of giving cash discounts is to induce the prompt payment of accounts, or, in other words, to secure working capital for the business. These discounts do not reduce the purchase or selling price of merchandise, but are allowances or rebates to induce prompt payment. While it is true that cash discounts on sales are generally beyond the control of the seller, since he cannot foretell which of the customers will take advantage of the discount, nevertheless, such discounts are of the same nature as those on purchases which the business itself takes, and consequently it is reasonable to subtract one kind of discount from

the other to show on the statement the excess as a capital income or expense, or if the amounts are substantial to show each kind at its gross amount. Although there is a considerable difference of opinion it is believed that cash discounts should be shown as capital expense or capital income. Sometimes cash discounts on sales are treated as selling expenses on the theory that they are allowed in order to induce sales. An interesting article on this subject will be found in the *Journal of Accountancy* for November 1920, (Vol. XXX No. 5, page 321) entitled "Neglected Commercial

Discounts" by J. Hugh Jackson. In the opinion of Mr. Jackson "discounts taken on accounts payable are not profit, but neglected discounts are losses." There is much to be said in favor of this view and in support of the bookkeeping procedure by which he proposes to carry it out.

The remaining topics suggested for discussion involve so many interesting points that space in this issue does not permit the presentation of them. They will be taken up in subsequent issues. Suggestions from readers almost invariably provide the basis for discussions which are well worth while.

A PROBLEM IN FEDERAL TAXES

By ERIC L. KOHLER *

SOME interesting points in connection with the computation of invested capital are involved in the income tax problem presented in this issue. In an investment business certain peculiarities as related to invested capital are met with and require careful treatment. The Treasury regulations relative thereto are not as specific as they might be.

The more important features of the

problem as involving invested capital are:

1. The basis for valuation of assets taken over in reorganization.
2. The restoration of asset values previously written off.
3. The various methods for calculating the amount of deductible interest.
4. The inadmissible assets of an investment business.

THE PROBLEM

Armstrong Scott and Company, dealing in bonds and stocks, was organized in 1912 as a partnership known as Armstrong and Scott. On July 1, 1914, a corporation (the Armstrong Scott Company) was formed to take over the assets and liabilities of the partnership which on that date were as follows:

ARMSTRONG AND SCOTT

BALANCE SHEET, JUNE 30, 1914

<i>Assets</i>		<i>Liabilities</i>	
Cash.....	\$14,743.21	Bank Loans.....	\$110,000.00
Accounts Receivable.....	9,462.15	Accounts Payable.....	21,416.82
Advances.....	32,500.00	Loan—W. A. Armstrong....	25,000.00
Notes Receivable.....	5,250.00	W. A. Armstrong, Capital...	43,497.26
Accrued Interest.....	2,346.89	P. D. Scott, Capital.....	27,847.21
Municipal Bonds.....	103,487.50		
Corporation Stocks.....	56,449.78		
Prepaid Expenses.....	3,521.76		
	<u>\$227,761.29</u>		<u>\$227,761.29</u>

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The books of the new corporation were opened with the following journal entry:

JULY 1, 1914

Cash.....	\$19,743.21	
Accounts Receivable.....	7,562.80	
Advances.....	32,500.00	
Notes Receivable.....	5,000.00	
Unpaid Subscriptions.....	20,000.00	
Accrued Interest.....	2,346.89	
Municipal Bonds.....	121,643.90	
Corporation Stocks.....	69,098.26	
Prepaid Expenses.....	3,521.76	
Good-Will.....	100,000.00	
To Bank Loans.....		\$110,000.00
" Accounts Payable.....		21,416.82
" Capital Stock.....		250,000.00

To record assets and liabilities of Armstrong and Scott taken over this date. Stock issued as follows:

<i>Name</i>	<i>Shares</i>	<i>Certificate Number</i>	
W. A. Armstrong.....	1,600	1	
P. D. Scott.....	650	2	
Frederick Morf.....	250	3	(held in trust)

Bonds and stocks were taken over at market prices existing on July 1, 1914, and accounts and notes receivable were eliminated which appeared doubtful. Frederick Morf, a former employee, was admitted on the basis that he subscribe for 250 shares of stock and make immediate payment of \$5,000, the balance to be paid by crediting dividends to the subscription account.

A second reorganization took place as of January 1, 1918, at which time the balance sheet of the Armstrong Scott Company stood as follows:

ARMSTRONG SCOTT COMPANY

BALANCE SHEET, DECEMBER 31, 1917

<i>Assets</i>		<i>Liabilities</i>	
Cash.....	\$22,647.80	Bank Loans.....	\$220,000.00
Accounts Receivable.....	16,473.21	Accounts Payable.....	6,437.85
Notes Receivable.....	3,152.00	Interim Certificates.....	12,352.16
Unpaid Subscriptions.....	10,000.00	Capital Stock.....	250,000.00
Accrued Interest.....	3,216.85	Surplus.....	44,892.77
Coupons out for Collection..	6,101.50		
Dividends Declared.....	14,500.00		
Liberty Bonds.....	33,575.00		
Municipal Bonds.....	283,467.87		
Corporation Stocks.....	135,326.63		
Prepaid Expenses.....	5,221.92		
	<u>\$533,682.78</u>		<u>\$533,682.78</u>

On this occasion the corporate name was changed from Armstrong Scott Company to Armstrong Scott and Company and a new interest was admitted, S. E. White, who invested \$100,000 in municipal bonds and cash. A condition of his investment was that certain stocks be transferred to a subsidiary corporation to be created and known as the Armstrong Company and that any profits or losses from these securities should accrue to the old stockholders only. For this and other reasons a 7% cumulative participating preferred stock was authorized and issued to him in which both principal and accrued and unpaid dividends (to the extent of 7% per annum) ranked with the general creditors of the corporation. He was also allowed to subscribe for 250 shares of common, to be paid for in the same manner as Frederick Morf's subscription.

Accordingly, stocks having a book value of \$102,470.63, together with accrued dividends of \$14,000, were transferred on January 1, 1918 to the Armstrong Company and the remaining bonds and stocks were put on the books of Armstrong Scott and Company at current market prices existing at that time less estimated selling costs. Accounts receivable were adjusted and Frederick Morf's subscription account decreased by his proportion of the general increase in capital stock of the new corporation. Comparative balance sheets at January 1, 1918 and December 31, 1919 and 1920 are given below :

ARMSTRONG SCOTT AND COMPANY

<i>Assets</i>	<i>Jan. 1, 1918</i>	<i>Dec. 31, 1919</i>	<i>Dec. 31, 1920</i>
Cash.....	\$88,647.80	\$40,940.45	\$36,377.34
Accounts Receivable.....	12,142.91	29,862.44	51,866.17
Notes Receivable.....	2,500.00		16,500.00
Deposits.....		12,000.00	
Unpaid Subscriptions.....	23,000.00	16,250.00	13,750.00
Advances to Armstrong Company.....	116,470.63	95,432.13	77,932.13
Accrued Interest.....	3,216.85	5,643.57	8,812.62
Coupons out for Collection.....	5,790.00	16,783.50	14,941.75
Dividends Declared.....	500.00	750.00	4,100.00
Liberty Bonds.....	33,575.00	86,433.18	73,911.80
Municipal Bonds.....	362,517.78	311,961.42	325,746.77
Corporation Bonds.....		152,691.24	123,822.51
Corporation Stocks.....	38,450.00	63,874.62	89,467.83
Prepaid Expenses.....	5,221.92	7,562.00	7,332.18
Total All Assets.....	<u>\$692,032.89</u>	<u>\$840,184.55</u>	<u>\$844,561.10</u>
<i>Liabilities</i>			
Bank Loans.....	\$220,000.00	\$275,000.00	\$230,000.00
Accounts Payable.....	6,437.85	12,101.16	17,542.93
Inventory Reserve.....		20,363.81	56,382.27
Reserve for Federal Taxes.....	8,242.88	23,616.90	26,000.00
Interim Certificates.....	12,352.16	45,432.12	10,439.21
Accrued Interest.....		932.11	1,233.46
Accrued Preferred Dividends.....		3,500.00	3,500.00
Preferred Stock.....	100,000.00	100,000.00	100,000.00
Common Stock.....	345,000.00	345,000.00	350,000.00
Surplus.....		14,238.45	49,463.23
Total Liabilities and Net Worth.....	<u>\$692,032.89</u>	<u>\$840,184.55</u>	<u>\$844,561.10</u>

In addition, the following points of information have been secured relative to the various items on the balance sheet:

1. ANALYSIS OF SURPLUS ACCOUNT

<i>Particulars</i>	<i>Debit</i>	<i>Credit</i>
July 1, 1918 Dividend (5%—Common)	\$17,250.00	
July 1, 1918 Dividend (3½%—Preferred)	3,500.00	
Dec. 31, 1918 Net Profits 1918		\$28,475.21
June 1, 1919 Federal Taxes 1918	3,546.18	
July 1, 1919 Dividend (10%—Common)	34,500.00	
July 1, 1919 Dividend (10%—Preferred)	10,000.00	
Dec. 31, 1919 Accrued Dividend (3½%—Preferred)	3,500.00	
Dec. 31, 1919 Federal Taxes 1919	23,616.90	
Dec. 31, 1919 Net Profits 1919		81,676.32
July 1, 1920 Dividend (10%—all stock)	44,500.00	
Dec. 31, 1920 Federal Taxes 1920	26,000.00	
Dec. 31, 1920 Net Profits 1920		105,724.78
Dec. 31, 1920 Balance	49,463.23	
	<u>\$215,876.31</u>	<u>\$215,876.31</u>

2. PARTIAL RECONCILIATION OF PROFITS PER BOOKS WITH NET INCOME PER TAX
RETURN—YEAR 1920

<i>Particulars</i>	<i>Debit</i>	<i>Credit</i>
Net Profits per Books		\$105,724.78
Furniture and Fixtures		168.40
Insurance on Officers		583.32
Exempt Liberty Bond Interest (total \$4,120)	\$2,465.50	
Municipal Bond Interest	15,324.18	
Dividends Received	8,432.40	
Contributions		1,575.00
Interest Paid During 1920	\$21,473.26	
Depreciation—Furniture and Fixtures		
Taxable Net Income before Adjusting for Interest Paid and Depreciation	81,824.42	
	<u>\$108,046.50</u>	<u>\$108,046.50</u>

3. Upon an examination of the bond and stock accounts the following securities are found to require comment:

(a) In the inventory of municipal bonds at December 31, 1920 are 50 \$1,000 Douglas County drainage bonds. These bonds have been held continuously since 1912 at which time they were acquired at 80. At March 1, 1913 their fair value was 88; upon incorporation at July 1, 1914 they reached a market value of 95 and on January 1, 1918 their value was increased to 98. These bonds had a market value of 98½ on December 31, 1919 and 1920.

(b) Bonds (exclusive of [a] above) which cost \$35,450 and were taken over at \$41,463.50 at January 1, 1918 are still on hand; they were reduced to a market price of \$40,065.80 December 31, 1919 and remain at the same figure at December 31, 1920. Stocks costing \$11,263 in 1917 were taken over at \$10,142.50 January 1, 1918 and are still on the books at the latter figure.

(c) Stock of the Jackson Varnish Company has been carried on the books at no value since 1912 in which year 10,000 shares of a par value of \$10 each were acquired in connection with an underwriting syndicate. Due to the speculative character of the concern the management has conservatively continued to carry the stock at no value. In 1920, 500 shares were sold for \$12 each and the entire sum carried to surplus as a profit.

(d) In 1918, 1,000 shares of stock in the Mexican Frontier Oil Company (purchased in 1916 and carried at cost on the books) were charged off as worthless upon ascertaining that title to certain lands in Mexico, the principal asset of the company, had been lost as the result of litigation which had extended over a period of years. Subsequent events have proved, however, that the write-off was in error, and in 1920 the stock was selling elsewhere at considerably above its cost. It being necessary to file an amended return for 1918 on account of other causes, this deduction will be excluded in preparing the amended return, and the management now desires to include the cost of the stock (\$12 a share) in invested capital.

(e) A stock dividend of \$20,000 was received in 1919 on stock of the Morgan Tube Company. None of the stock has been sold since. The entire amount was included as 1919 income.

4. Amended returns will be filed for 1918 and 1919; and underpayment of \$2,347.51 for 1918 is reported, and an overpayment of \$1,163.40 for 1919. Assume the accrued interest on the former amount to have been \$437.46 at January 1, 1920 and \$720.66 at December 31, 1920. No expression has as yet been given on the books to the additional tax liability.

5. Gross profits from the sale of municipal bonds during 1920 were \$46,582.01 and from corporation stocks \$38,466.23. An inspection of the individual accounts leads to the conclusion that averaging the various assets at the beginning and end of 1920 will result in a substantially correct showing of the assets held during the year.

6. Insurance policies on the lives of W. A. Armstrong and P. D. Scott were taken out in 1914. On January 1, 1918 the cash surrender value was \$1,675.18, and on December 31, 1919 and 1920, \$2,047.50 and \$2,422.30 respectively.

7. Furniture and Fixtures has been regarded as an expense since the inception of the original partnership. Purchases and sales may be summarized thus:

JANUARY AND FEBRUARY BALANCE

PURCHASES		SALES		
Year	Purchases at Cost	Year Purchased	Cost	Selling Price
1912.....	\$1,875.26	.....	.....	.....
1913.....	1,237.50	1912	\$75.00	\$50.00
1913.....	847.22	.....	.....	.....
1914.....	73.50	.....	.....	.....
1915.....	.....	.....	.....	.....
1916.....	.....	1912	567.60	237.50
1917.....	688.00	1914	73.50	10.00
1918.....	92.50	.....	.....	.....
1919.....	123.23	1912	1,045.00	500.10
1920.....	183.40	1919	57.50	20.00

Each year 10% per annum has been computed for tax purposes on the balance at the beginning of the year; profit or loss on sales is subtracted or added thereto.

8. Additional capital stock of \$5,000 was sold at par August 16, 1920.

9. The inventory reserve represents the difference between cost and market of both stocks and bonds all of which have thus been valued consistently at cost or market whichever is the lower.

10. Approximately two-thirds of the collateral on bank loans during the year consisted of municipal bonds.

From the above information compute the invested capital and the taxable net income for the year 1920.

SOLUTION TO PROBLEM

(a) In order to arrive at the interest paid which must be excluded from allowable deductions on account of its applicability to tax-free securities, it is first necessary to ascertain the character of the interest-bearing obligations. In this instance there are three sorts of interest-bearing liabilities: preferred stock (ranking with general creditors and thus treated for tax purposes as borrowed capital [Art. 812]), interim certificates, and bank loans. It could scarcely be contended under the present tax law that the first exists in whole or in part for the purpose of purchasing or carrying tax-free securities. Section 214 (a-2) states: ". . . interest paid on indebtedness incurred or continued to purchase or carry. . . ." The insertion of the words italicized would appear to limit the indebtedness to *current* indebtedness consisting here of bank loans and interim certificates.

At least five methods have been advocated by various authorities by means of which the amount of paid interest excluded in the return of dealers in securities may be determined. The first is to regard all interest paid as deductible on the theory that bank loans and similar obligations constitute a permanent means of financing a business of this character and that the receipt of tax-free interest is merely incidental to the main operations of the business. Another method is to compute, from the collateral record, the portion of tax-free interest

securities up for collateral. A third method is to apply to interest paid a fraction, the numerator of which is the yearly average of all municipals and the denominator the average of all securities, including municipals, held for trade. The fourth is similar to the third except that the denominator is the average of all current assets commonly included in working capital. Considering funds and their application in this type of enterprise it is axiomatic that a bank loan represents an equal investment in a dollar's worth of municipal bonds, a dollar's worth of cash, or any other current asset. Finally the same principle as is used in computing the inadmissible percentage may be applied. This method resembles the third and fourth just described, the denominator being *all* assets and not merely the inadmissibles or current assets. If the law regards a capital liability as invested ratably in current and capital assets a current liability must also be so invested.

The fourth method has been followed here in view of the use of the words "incurred" and "continued" in the law as above quoted. Balance sheet totals are adjusted in conformity with changes for tax purposes and the following items are specifically excluded: (1) Advances to the Armstrong Company, this falling outside the ordinary concept of working capital although some liquidation has already taken place; (2) Subscriptions (Art. 833); (3) Good-Will and Furniture and Fixtures.

Particulars	December 31	
	1919	1920
Balance Sheet totals	\$840,184.55	\$844,561.10
Add: Reinstated Security	12,000.00	12,000.00
	<hr/>	<hr/>
	\$852,184.55	\$856,561.10

Particulars	December 31	
	1919	1920
<i>Less:</i>		
Advances Armstrong Co.....	\$95,432.13	\$77,932.13
Unpaid Subscriptions.....	16,250.00	13,750.00
Inventory Reserve.....	20,363.81	56,382.27
Overvaluation of Bonds.....	6,115.80	6,115.80
Stock Dividend.....	20,000.00	20,000.00
	<u>\$158,161.74</u>	<u>\$174,180.20</u>
Total Current Assets.....	<u>\$694,022.81</u>	<u>\$682,380.90</u>
		694,022.81
		<u>\$1,376,403.71</u>
Average Current Assets during 1920.....		<u>\$688,201.86</u>
The average municipal bonds held were:		
Total, per Balance Sheet.....	\$311,961.42	\$325,746.77
<i>Less:</i> Overvaluation of Bonds.....	6,115.80	6,115.80
Total as adjusted.....	<u>\$305,845.62</u>	<u>\$319,630.97</u>
		305,845.62
		<u>\$625,476.59</u>
Average Municipal Bonds held during 1920.....		<u>\$312,738.30</u>
Ratio of Average Municipals to Average Current Assets.....		45.44%

Hence, of the interest paid, 45.44% thereof is not an allowable deduction because applicable to municipals. 45.44% of \$21,473.26 is \$9,757.45. Interest on loans to purchase or carry stocks is deductible although corporate stocks are inadmissible assets.

(b) Calculation of furniture and fixtures, reserve for depreciation thereon, and deductible depreciation and losses from disposal:

FURNITURE AND FIXTURES				RESERVE FOR DEPRECIATION			
Year	Debit	Credit	Balance	Debit	Credit	Balance	Loss from sale
1912	\$1,875.26	.....	\$1,875.26	.....	.....	.....	.....
1913	1,237.50	\$75.00	3,037.76	\$1.25	\$31.25	\$30.00	\$23.75
Net Balance .....	.....	.....	3,007.76	.....	.....	.....	.....
1913	847.22	.....	3,854.98	.....	250.65	250.65	.....
1914	73.50	.....	3,928.48	.....	385.50	636.15	.....
1915 .....	.....	.....	3,928.48	.....	392.85	1,029.00	.....
1916 .....	.....	558.14	3,370.34	213.95	392.85	1,207.90	116.15
1917	688.00	73.50	3,984.84	22.05	337.03	1,522.88	41.45
1918	92.50	.....	4,077.34	.....	398.48	1,921.36	.....
1919	123.23	1,027.58	3,172.99	702.18	407.73	1,626.91	158.28
1920	183.40	57.50	3,298.89	5.75	317.30	1,938.46	31.75

(c) Calculation of net income subject to tax:

Balance per original statement	\$81,824.42	
Add: Non-deductible Interest Paid (45.44% of \$21,473.26)	9,757.45	
		<u>\$91,581.87</u>
<i>Less:</i>		
Dividends on Preferred Stock	\$7,000.00	
Interest on Unpaid Taxes	283.20	
Depreciation of Furniture and Fixtures	317.30	
Loss on Sale of Furniture and Fixtures	31.75	7,632.25
		<u>\$83,949.62</u>
Taxable Net Income		<u>\$83,949.62</u>

(d) Computation of inadmissible percentage:

	<i>December 31</i>	
	<i>1919</i>	<i>1920</i>
Total assets arrived at in (a) above	\$694,022.81	\$682,380.90
<i>Add:</i>		
Advances Armstrong Company	95,432.13	77,932.13
Furniture and Fixtures (net)	1,546.08	1,360.43
Cash Surrender Value Life Insurance Policy	2,047.50	2,422.30
Good-Will (25% of \$250,000)	62,500.00	62,500.00
Total All Assets	<u>\$855,548.52</u>	<u>\$826,595.76</u>
		855,548.52
		<u>\$1,682,144.28</u>
Average All Assets held during 1920		<u>\$841,072.14</u>

Inadmissible Stocks:

Balance, December 31, 1919, as adjusted	\$55,874.62
Balance, December 31, 1920, as adjusted	81,467.83
	<u>\$137,342.45</u>
Average held during year	<u>\$68,671.23</u>

Income from Stocks:

Dividends Received	\$8,432.40
Profits from Sale	38,466.23
Total Income Received	<u>\$46,898.63</u>
Non-taxable Portion	<u>17.98%</u>

Hence, 17.98% of \$68,671.23 is inadmissible, or \$12,347.09

Inadmissible Municipal Bonds:

Balance, December 31, 1919, as adjusted.....	\$305,845.62
Balance, December 31, 1920, as adjusted.....	319,630.97
	<u>\$625,476.59</u>

Average held during year.....	<u>\$312,738.30</u>
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Income from Municipals:

Interest Received.....	\$15,324.18
Profits from Sale.....	46,582.01

Total Income Received.....	<u>\$61,906.19</u>
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Non-taxable Portion is \$15,324.18 less Interest Paid of \$9,757.45, or.....	<u>8.99%</u>
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Hence, 8.99% of \$312,738.30 is Inadmissible, or.....	<u>28,115.17</u>
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Average Inadmissibles held during 1920.....	<u>\$40,462.26</u>
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Ratio of Inadmissibles to all assets.....	<u>4.81%</u>
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This procedure results in some inaccuracies inasmuch as the computation of the inadmissibles becoming admissible may be applied to each stock and bond held and to only that portion of the inadmissible as was sold during the year. Here, as in the case of non-deductible interest, the regulations are silent as to the exact procedure to be followed in the computation.

(e) Calculation of invested capital:

Common Stock.....		\$345,000.00
Surplus.....	\$14,238.45	
Less: Additional tax liability for 1918-1919.....	1,621.57	12,616.88

Reserve for Federal Taxes.....		<u>23,616.90</u>
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Total at January 1, 1920.....		<u>\$381,233.78</u>
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Additions:

Good-Will.....	\$100,000.00	
Stock Reinstated.....	12,000.00	
Insurance Policy.....	2,047.50	
Furniture and Fixtures.....	1,546.08	115,593.58

Deductions:

Limitation on Intangibles.....	\$37,500.00	
Overvaluation of Bonds.....	6,115.80	
Stock Dividend.....	20,000.00	
Unpaid Subscriptions.....	16,250.00	79,865.80

\$416,961.56

Changes during year:

Federal Taxes (.42144809 × \$23,616.90)	\$9,953.30	
Dividend paid July 1	\$37,500.00	
Available Income	\$41,974.81	
Accrued Taxes	9,150.00	32,824.81
Paid from Invested Capital as at January 1	\$4,675.19	
\$4,675.19 for 184 days	\$2,350.37	
Total Deductions		12,303.67
Stock Sold during year:		\$404,657.89
Payment on Subscription July 1 (\$2,500 for 184 days)	\$1,256.83	
Cash Sale August 16 (\$5,000 for 138 days)	1,885.25	3,142.08
		\$407,799.97
Less:		
Deduction on Account of Inadmissible Assets (4.81%)		19,615.18
Total Invested Capital		\$388,184.79

COMMENTS ON PROBLEM

1. Good-Will was paid in July 1, 1914 and subsequently written off, presumably as a conservative measure. By the provisions of section 331, in a reorganization after March 3, 1917 wherein 50% or more of the controlling stock remains in the hands of the same interests no greater value may be allowed for any asset than would have been allowed the original owner. But the good-will would have been allowed the old corporation providing it was able to stand the test of article 851.

2. Although a portion of the assets of the predecessor corporation were taken over at a value in excess of cost, only those assets need be considered in computing invested capital which are still on hand and valued in excess of cost.

3. Furniture and fixtures in an investment enterprise may be most simply handled by summarizing on a work sheet similar to (b) above, the principal facts since March 1, 1913, there being no other means of valuing them at July 1, 1914.

4. While the 7% participating preferred

stock described in this problem is by no means a common issue, dividends thereon in excess of the guaranteed amount are likely to be regarded as a true dividend. A situation somewhat analogous to that of inadmissibles is created in that dividends may be paid on obligations not properly a part of invested capital.

5. Subscriptions to be reduced by dividends are contingent subscriptions and therefore not a part of invested capital until paid in.

6. No ownership of or affiliation with the Armstrong Company exists, inasmuch as there is no intercompany ownership of stock and the interests of the owners in the two corporations are quite different.

7. Stock of the Jackson Varnish Company constitutes a claim for paid-in surplus only if a definite value at the time of the first reorganization can be proved. No enhancement of value due to a rising market may be capitalized until actually realized upon.

8. No adjustments on the books are required except for the tax liability.

REVIEWS OF BUSINESS BOOKS

HUMAN EFFICIENCY AND LEVELS OF INTELLIGENCE

By Henry Herbert Goddard. Lectures delivered at Princeton University under the Louis Clark Vanuxem Foundation. 128 pp. Princeton University Press

EMPLOYMENT PSYCHOLOGY

By Henry C. Link, Ph.D. Introduction by Edward Lee Thorndike. 440 pp. The Macmillan Company

REVIEWED BY THOMAS CONYNGTON*

In dealing with the raw materials of industry, the merest tyro recognizes that there are different grades and that the manufacturer or dealer must have expert knowledge of these grades and standards and of their respective utility for his purposes. Within the last few years attention has been called to the self-evident fact that the human material that we deal with in government, education, industry, and in penal and charitable institutions, as well, is like other raw material, capable of being graded as to quality, quality in this case being intelligence.

The pioneers in this work gave to the educational world, about 1908, the Binet-Simon tests for school children. It was found that in most of the classes children of the same age were of varying degrees of intelligence. The immediate advantage derived from this testing was the removal from the classes of those children who were of subnormal intelligence, thereby relieving the teacher of onerous and unprofitable effort and giving the demoted children the special classes and the special attention their retarded mental development required. In like manner the few children of superior intelligence were promoted to classes of their own mental level where they could get the advanced training that their ability deserved. These tests have since that time been greatly improved in content and in

method and are in use in all the better schools in this country.

The next step revealed new possibilities in dealing with juvenile delinquents and criminals, as the grade of intelligence is a necessary factor in estimating moral accountability. The use of these tests demonstrated that a large proportion of all juvenile delinquents were mentally deficient and nearly all were of low intelligence.

II

Then came the Great War. America came in late. The time for preparation was short. In many departments there was waste, prodigal expense, too often traitorous profiteering. In contrast to all of this the human material in the army was graded, prepared, and sent across with never equaled rapidity and skill. The government called to its aid some of the most skilled psychologists in the country. They devised the famous army intelligence tests. The first step in preparing the great army to be sent across the sea was to grade the men that it might be known who were mentally fitted for commissioned officers, for non-commissioned officers, and for privates, and to separate those who were so lacking mentally as to unfit them for any work across seas. This in the usual army routine was a work of many months and tedious drill.

The tests devised saved all this time and

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work. The men were examined in large groups and the results were wonderfully accurate and of inestimable value. As a by-product of great social value, it gave data never before secured. The books here reviewed treat of the ways in which the data from these tests can be used to solve business, industrial, and social problems.

Certain necessary conclusions from these results and their bearing on the problems of modern business and of social and political life make up the substance of Mr. Goddard's work, which is brief and reasonably non-technical. He says of these army tests:

Over one million, seven hundred thousand men in the army have been tested by these methods, and their mental level determined and recorded. The results were so uniformly accurate and in agreement with the experience of the officers, that they were quickly accepted and used as a basis of procedure. Officers were appointed from the men who were found by the tests to be most intelligent. Those who were found to be least intelligent, proved also to be dull as determined by the daily routine and were recognized to be of too low mentality to be profitable to send overseas.

Dr. Link in his book, refers to their great utility in industry as follows:

By means of these measures or tests, it is becoming possible to set up standard specifications for the kinds of applicants who are desired for a given position, and to fill these specifications as the tool maker would fill the specifications for a tool which he is to make. Not only will it be possible to apply these standards in the particular office or location where they have been originated, but it will be possible to apply them in all places. The psychological tests devised for use in the army, for instance, were distributed throughout every camp in the country, and as a result, the classification of all privates, commissioned and non-commissioned officers, was based largely upon standard measures.

III

The army tests were, as has been mentioned, for the most part group tests; that is, the men were examined in groups of fifty to three hundred. In the nature of the case, group testing could not be as accurate as the individual examinations given in our schools and colleges. Nevertheless, the results of this work when repeatedly

reviewed and investigated by the General Staff were always approved because they agreed with their experience and the results of the usual routine training. As stated in the army report, "it has been thoroughly demonstrated that the intelligence ratings are useful in indicating a man's probable value to the service."

The ratings that follow are arranged to show the results obtained by averaging all the returns from the million, seven hundred thousand examined. The official report gives these percentages:

A	Grade	4½%
B	"	9%
C+	"	16½%
C	"	25%
C-	"	20%
D	"	15%
D-	"	10%
E	"	

Explanation of letter ratings: The rating a man earns furnishes a fairly reliable index of his ability to learn, to think quickly and accurately, to analyze a situation, to maintain a state of mental alertness, and to comprehend and follow instructions. The score is little affected by schooling. Some of the highest records have been made by men who had not completed the eighth grade. The meaning of the letter ratings is as follows:

"A". The "A" group is composed of men of marked intellectuality. When endowed with leadership and other necessary qualities they make the best officers. Only four and one-half per cent of all examined attain this marking.

"B". The "B" group intelligence is superior. About nine per cent of those examined earn this grade. Those in this group are capable of making an average record in college.

"C+ ". About sixteen and one-half per cent attain this rank. All these should have had a high school training.

"C". This is the rank of average intelligence. It includes about twenty-five per cent of our soldiers, and gives an excellent private type with some fair material for non-commissioned officers.

"C- ". This group is of low average intelligence, and includes about twenty per cent.

"D". This group is of inferior intelligence, and includes about fifteen per cent.

"D- " and "E". These are of the lowest grade intelligence, and include about ten per cent of all examined. Most of those in this grade are below the mental age of ten years.

It is to be noted that only 30 per cent of those examined rank in the three upper

grades, and in the four lowest grades are found 45 per cent of all who were examined. Mr. Goddard says:

The significance of these results will be appreciated when we consider that one million, seven hundred thousand drafted men in the army may be accepted as a fair sample of the population of the United States. Whatever we may determine in regard to that group of men we shall probably find applicable to the country as a whole. It is thus probable that we can find in these results, suggestions and conclusions of profound importance as bearing upon our social problems and social well-being.

Using these results as a guide we can roughly estimate that in our country we have about four and one-half millions of people of superior intelligence, the intellectual elite. We have then nine millions of college grade, and below these sixteen and one-half millions who could profitably take at least a high school education.

Then in the lower ranks, and this is the discouraging feature, 10 per cent of the population is distinctly inferior, that is, the brightest of this low grade have the same and no more intelligence than is possessed by a normal ten-year old child. Above this grade 35 per cent of the population have only the intelligence of children from ten to fourteen years.

This shows us at a glance the enormous proportion of the human race that is of moderate intelligence, a fact not usually appreciated by the people of higher intelligence; to which all readers of this book (and this magazine) must modestly admit they belong, for the simple reason that a "C" intelligence or less could not be interested in these topics.

Out of the 212 questions asked in making what is called the "alpha test," any fifteen answered correctly within fifty minutes would have put the men examined in the D group. How low in intelligence those are who make up the 10 per cent in the D and E groups may be realized when we examine the 15 questions that, answered correctly, would have put them all in the next higher grade.

1. How many are 30 men and 7 men?
2. Are cats useful animals because they catch mice, or because they are gentle, or because they are afraid of dogs?

3. Is leather used for shoes because it is produced in all countries, or because it wears well, or because it is an animal product?

4. Do these two words mean the same or opposite: *wet—dry*?

5. Do these two words mean the same or opposite: *in—out*?

6. Do these two words mean the same or opposite: *hill—valley*?

Rearrange these groups of words into a sentence and tell whether it is a true or false statement.

7. lions—strong—are

8. houses—people—in—live

9. days—there—in—are—week—eight—a

10. leg—flies—one—have—only

11. Write the next two numbers in this series:
3, 4, 5, 6, 7, 8

12. In this series: 15, 20, 25, 30, 35

13. In this series: 8, 7, 6, 5, 4, 3

14. From the four words in heavy type select one that is related to the third word in italics as the second is to the first; *gun—shoots*: : *knife—run—cuts—hat—bird*

15. *ear—hear*: : *eye—table—hand—see—play*

It may be well to emphasize the fact that these tests were designed to measure only intelligence and not the knowledge that a man may have acquired. A man's intelligence is an inheritance from his ancestry; his knowledge he acquires himself from the schools and from life. The theory on which these tests are based is that this inborn intelligence grows and develops, as the physical man grows and develops, until it has reached the individual limit. When it has reached this limit it grows no more. Like his stature, once attained it stops, and by taking thought no man can add to his height nor to his intelligence, though he may add infinitely to his knowledge and skill in its use.

The period for attainment of full intellectual growth is about nineteen years. The average human being never does attain this full normal development of intelligence, because his intellectual growth stops when he is thirteen, fourteen, or fifteen years of age. In such case he may grow to the full stature of manhood, but his mind remains on the mental level of childhood. If his mental growth stops at eleven or twelve years of age, he is what psychologists call a "moron." Many never attain even this

low mental altitude, and can never be ranked higher than the D- and E groups in the army tests.

IV

At this point in the review it may be advisable to stop and define "intelligence" with some precision. Mr. Goddard says that it is:

A unitary mental process which we call intelligence; and that this process is conditioned by a nervous mechanism that is inborn.

He says further:

That we have generally confused intelligence with knowledge.

We may point out that intelligence is an inherited force while knowledge is wholly acquired.

The theory of mental levels holds that every human being comes into the world with a potentiality for mental development that will carry him just so far.

The intellectual development is largely independent of what we call learning or knowledge; and second, that not all develop to the highest level, or even near to it; many stop at some one of the many levels of childhood.

From this fact he derives that latter portion of the title of his book, "Levels of Intelligence."

Passing for the moment to the second work on our list, Dr. Link explains intelligence as follows:

Mental alertness, the ability to analyze a situation and also to follow instructions.

Most psychologists define intelligence as the ability to profit by trial and error.

We define intelligence in general as the ability to learn. All the other definitions seem to boil down to that.

Referring to the Binet-Simon intelligence scale, he says:

There are a great many little tests and the total average gives the general intelligence or intellectual age level of a person.

V

In regard to the army tests, especially in the higher grades, it should be remembered that they were designed to ascertain those particular kinds of intelligence most valu-

able in army officers. The quality of intelligence most desired was mental alertness, i.e., the ability: (1) to analyze a new situation quickly, (2) to comprehend instructions rapidly and accurately, (3) to issue clear and intelligent orders, and (4) to arrive at a sensible decision in a crisis.¹

These qualities have their great value in business and social activity, but it is obvious that many men of high intellectual powers might not successfully pass tests prepared mainly to try out the qualities specified. The ability to throw a rifle to one's shoulder, fire instantly, and hit the bull's-eye is good, but it may be better to be able to start a tunnel from opposite sides of the Hudson and meet accurately beneath the center of the river. Men in executive and commanding positions in both civil and military life may use intellectual powers that would never be discovered by intelligence tests as now used.

VI

Henry Herbert Goddard, author of "Human Efficiency and Levels of Intelligence," has been working in this field for more than ten years past. He is director of the Bureau of Juvenile Research in Ohio and his book is compiled from four lectures delivered at Princeton University under the Louis Clark Vanuxem Foundation, and is based on the remarkable results secured from the army tests during the Great War.

Mr. Goddard's work appeals most strongly to the thoughtful reader in the suggestions it makes as to the important bearing of his subject on many of the most vital problems of the day. His own life work as director of the Bureau of Juvenile Research of Ohio, is to devise methods to train the lower 10 per cent so that those of sufficient intelligence may earn their way and so far as possible be saved from delinquency and pauperism. He would have those whose level is yet lower kept under tutelage all their days, that they may not perpetuate their kind or fall victims to criminality and degrading habits of life. This phase of our subject is of vital import, but space prevents an extended discussion.

¹ The Personnel System of the United States Army, Vol. 11, p. 260.

He calls attention also to the frightful loss of efficiency and productive force caused by the general failure to apportion the work of the country so that each man should do the highest grade work to which he is equal. This is a matter of social concern, for the multitude of men wasting their time because they are not doing the work they could do best simply means a dissipation of human energy.

This is another problem for our schools. They should turn out men prepared to do their work and it should be the work that their mental powers fit them to do best. The use of intelligence tests as an aid to vocational guidance is a phase of the subject that should come home to each individual. Many men lead restless and dissatisfied lives because they have made vocational mistakes. In all the professions are men who are failures and makeshifts who might have led satisfactory and profitable lives in some vocation adapted to their mental level. The matter of vocational guidance is already being given serious thought in our higher educational institutions and will have yet more attention in days to come.

Many a man attempts to be a physician, a lawyer, a clergyman, who has not the requisite intelligence. These professions are strewn with failures besides having vast numbers of people who are practically nonentities in these professions because they have not sufficient intelligence to make their mark. When it comes to mercantile pursuits, many a man has started in business only to fail because his intelligence was not equal to the task he had assumed.

The author then suggests the vital importance of considering the mental levels of the masses with regard to our dealings with labor and with the populace in all social and political matters. The employer of the future should bear in mind that while he is dealing with men and women in stature, if he could see them as they are in thought and reasoning power, his workrooms would be filled with children, ten, eleven, twelve, and some few fourteen and fifteen years old. If working men were in mental powers the equal of those who employ them, their reactions to tyranny would not be as childish and ineffectual as they so often are. Those born in the working class with normal men-

tal ability, have, for the most part, studied, saved money, and trained their powers and by these means have risen out of the ranks; hence, nearly all of those who are left are on the lower mental levels, and because this weakness has too often led to their exploitation and is too often taken advantage of by those who employ them, they strike back in such futile and destructive ways as they can, and so become a menace to us all.

VII

It should always be remembered that, while the matter of mental levels is of first importance and can easily be ascertained, in appraising the effectiveness and social value of the individual there are other weighty factors harder to ascertain and more difficult to measure.

Most important of these are the energy and vital force of the individual. These may make a Roosevelt or a Cecil Rhodes a more valuable citizen than many men of higher intellectual powers. It may be purely a physical matter, "a question of digestion and assimilation, heart activity and blood composition," but it makes for effectiveness and social utility.

Knowledge might be placed second, though this must be acquired by the exercise of intelligence, and apart from intelligence it is of little worth.

The extreme of this is familiar in the man who, as it is commonly expressed, "is a walking encyclopedia," but who makes almost no use of his knowledge for the usually unappreciated reason that he has not the natural intelligence necessary. A man well known to the writer has an intimate knowledge of the facts of history sufficient to have made him a statesman, but lacking the intelligence to use his valuable acquisition in this line he spent a perfectly colorless life unknown outside of his own township and unappreciated even there.

Ability to adapt oneself to any social environment may be considered third. As someone has said, it is better to be a good mixer, than to be able to put Ph. D. after your name.

As soon as man began to congregate in groups, there arose at once the question of social adjustment and the problem has increased in complexity with every move which has tended to crowd

individuals closer together. We are accustomed to regard ability to adapt oneself to his environment as a measure of intelligence.

Fourth, we find the matter of temperament, or the emotional nature, affects profoundly the value of the individual as a social factor. Not a few men of high intelligence have failed by reason of their uncontrolled emotions, and a multitude of men of lower mentality have failed from the same cause. Generally a man of good intellect controls his emotions, so that the results of the intelligence tests are not often affected by this unmeasured factor.

Fifth, when it was necessary to select officers for the army, in addition to ability to meet the intelligence tests, the physical qualities of the man were an essential factor. In all walks of life the vigor, health, physique, and personal appearance of the individual enhance the value of his services to the community. To an extent these qualities may be modified or developed and improved by the exercise of intelligence.

Sixth, the moral qualities should have weight. These, however, are in many cases the result of: (1) intelligence, (2) knowledge acquired by the use of intelligence, and (3) self-discipline and control resulting from applied intelligence.

As to these other factors Mr. Goddard's position is as follows:

Without some word of explanation the reader might judge that the author of this book thought that intelligence was the sole determiner of human conduct. Such a view is of course inconsistent with the most obvious facts.

It happens, however, that in the solution of this problem of human efficiency, we are just at present better equipped to evaluate the part intelligence plays, than any other of the psychological factors. It therefore seems worth while to solve our problem in terms of intelligence as though it were the only variable. The other unknown quantities may be considered when the part they play is better understood.

Let us solve our equation for x now and leave y and z for later consideration when we shall know as much about emotion and temperament as we now know about intelligence.

VIII

Dr. Link's, "Employment Psychology," is a valuable exposition of the special tests

and methods used in selecting employees in factory and office. It is the application of intelligence tests to the particular end of selecting capable employees. In many such cases special kinds of trained intelligence are desired and physical aptitudes and other qualities than intelligence are often of value. The problem is not only to select employees from many applicants but to place these employees where they will do most good for the establishment and for themselves.

In a marked degree the question of vocational fitness is a problem that comes to every employer of labor. A workman doing what he can do well, is a contented workman; while a workman trying to do something he cannot do, is a discontented man. Dr. Link makes it plain that even men of low mental grade can be contented and useful if they have simple tasks adapted to their powers. Otherwise these men of low-grade intelligence, being stupid, cannot follow directions, fail to understand orders, try the temper of foremen, and constantly change their jobs because they fit in nowhere.

Of these he says:

However, it must not be thought that the purpose of giving tests is to eliminate such individuals entirely. There are many automatic machines which require an operator with only the most elementary kind of intelligence and attention; and there is a large amount of manual work which involves only the learning of a few simple movements which are continuously repeated in exactly the same way and which, when once acquired, can be performed without the aid of attention. For such work, mental defectives are often well adapted. Indeed, they are often better fitted for it than individuals of a higher intelligence because, having very few ideas and very little mental activity, they are unable to perceive the monotony and dullness of their work. They are themselves quite automatic, and can almost wholly lose themselves in the work which they are doing. What better solution of the problem of idiocy and undeveloped mentality can there be, from both an economic and social standpoint, than to detect such applicants and assign them to work for which they are peculiarly adapted?

IX

Whoever has had to argue with individuals, not scientifically minded, and has had

his efforts to advance a general rule of action frustrated by the person who has a single instance to the contrary, will sympathize with Dr. Link in the following expression of opinion on such lack of logic.

Most individuals have no conception whatever of the statistical method and of the importance of basing judgments on a large number of cases rather than a small number of isolated instances. In the experience of the writer it has seemed as if not one business man in a hundred were able to free himself from the compelling magic of the isolated dramatic instance.

When it comes to the higher levels of intelligence, it is true that the tests at present in use are not altogether satisfactory. Dr. Link frankly admits the present limitations on their utility.

He says:

The question which is probably of most interest to industrial leaders and to organization heads, is the choice of men for higher position, executive, planners, organizers—the so-called *big men*. Can tests be applied which will make it possible to discover men of large caliber and large capabilities; men who have the ability to plan and execute great projects; men who stand head and shoulders above their fellow men? Can tests make it possible to select the exceptional man, the genius? This question must frankly be answered in the negative. The psychological method is at the present stage of its development unable to select men who possess the exceptional qualities required by the exceptional position.

X

The problem of greatest menace at this time is found in the strained relations between capital and labor. The facts as to the lower intellectual ability of the working classes indicate that the solution must come from those on the other side.

There is an old Persian proverb which says, "The wise man can understand the foolish because he has been foolish, but the foolish cannot comprehend the wise because he has never been wise."

No argument is needed to demonstrate that upon those who have the higher intelligence rests the responsibility for solving the ever present problem of capital and labor. It will not be solved by any selfish clash of interests, but by so conducting

industrial activities as to lead working men to believe that those of superior intelligence are really concerned for their welfare and happiness. Some few employers have thus solved their problem.

Industrial leaders of the future must be wiser than those of the past have been, for the business competition of the future will be won out by those men of understanding who show a real leadership of the workers rather than by those who rely solely on the will to cut prices and wages till they or their competitors are forced to the wall.

At the same time it is to be gravely considered whether or not any serious participation in management is possible by workers of the usual low average mentality. It should be known by careful intelligence tests what is the mental level of, say, printers, machinists, longshoremen, truckmen, railway men and factory operatives, and by the same means, what are the abilities of those they choose to lead them. It would be of great advantage to the rest of us in all questions of collective bargaining if it could be known what degree of wisdom and mental level is to be found in the leaders of the respective parties on both sides.

When the question is of the "dictation of the proletariat," the fact of the low mental level of those who compose the proletariat would indicate that the experiment must be disastrous. In fact, any plan for socialistic administration of our industries would seem to be hopeless so long as the masses of our people have less intelligence than ordinary high school freshmen.

In our republican form of government the laws are made by representatives chosen by the people, on the supposition that the people will elect men intellectually qualified to legislate and able to give their time to deliberation and to study of public matters. Of late years there has been a movement to legislate by means of a referendum to the people. If the mass of the people are of the low order of intelligence indicated by the army tests, it would seem open to question whether this is a wise thing to do.

It has been said that every people have as good a government as they deserve. Perhaps this should read that every people have as good a government as they have intelligence to demand. A country like

Mexico with a population on the lowest mental levels, cannot have a model government. People like the Dutch, the Danish, the Swiss, and other thrifty and intelligent folk, will always have a good government if they are not under the dominion of some foreign foe. With greater accuracy in making tests and averaging results, it should be possible to ascertain scientifically what races and what people are on sufficiently high mental levels to be capable of self-government and what peoples should be under some form of mandate. It would be of interest if we could know just how much the average mental level of the American people has fallen since the time of the Revolution, and to know with some approximation to accuracy how much more of base metal can be put into the melting pot before we lose the forms of free government.

If as a people, those who are in the higher mental levels of intelligence fail to function in governmental activities or become reduced in numbers below the proportion required to guide the increasing complex, social, business, and civic progress of the country safely forward, our day as a nation approaches its close. Spain's decadence, it is said, dates from that time when the atrocities of the Inquisition, destroyed or drove from her borders her best intelligence. The proportion of those on the higher mental levels left was not enough to save the nation and her proud eminence among nations vanished to return no more.

If the present dominance of our business and professional classes is overwhelmed by an increasing preponderance of those of

the mediocre and lower levels of intelligence, or if without increase of numbers those of the lower levels are antagonized and unified by self-seeking, profiteering, or any other forms of exploitation, and are so driven into class conscious political action, the glory of the Republic will have departed and the way be opened for unnumbered ills.

The intellectual quality of our elective rulers at present is not all it should be, and those of us who are numbered with the classes that now dominate and are properly held responsible have little in which to take pride, but it might be worse. If it is not to be very much worse, those who now rule and lead society, business, and political life, must show such a desire to deal fairly, justly, and considerately with those on the lower levels as will give them confidence in and kindly feeling toward the classes who actually do have the best of life. The majority of our working population get less than a living wage. They have the luxury and opulence of those who are wealthy ever before them. They are not philosophers, but child-minded, and resent these circumstances. If they ever become generally convinced that the more intellectual classes are their enemies, and are keeping the good things of life for themselves, they will elect to rule us demagogues, ignorant and prejudiced and skilled only in appeal to the class consciousness and bitter resentments of the poor. The tragedy of Russia will be reenacted here and the blind Samson of labor will exert his brute power and tear from their foundations the pillars that sustain the fabric of our civilization.

PROFITS, WAGES, AND PRICES

By David Friday, Professor of Economics, University of Michigan. 256 pp. Harcourt, Brace & Howe

REVIEWED BY OLIVER C. LOCKHART*

In this book Professor Friday makes a broad survey on both economic and statistical grounds of the rise of prices in the

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United States since 1914 and its effects on the returns to capital and to labor. But this is no mere record of observed fact; it is essentially a work on social economics. As such, it traces the influence of these

recent changes on our economic life and well-being and makes important suggestions for the future of our economic organization. The book is written for the general reader; it eschews footnotes, the hall-mark of the academic economist, and despite an occasional lapse into technical phrases, a great deal of information and sound analysis relating to our economic system is effectively and interestingly presented.

The chapters dealing with profits have their statistical basis chiefly in the reports of the Commissioner of Internal Revenue, but draw also on the official figures for railroads and national banks and on published reports of numerous corporations to their stockholders. Here is pointed out the wide variation in the recent growth of profits in different lines of industry and in the rate of profits among individual enterprises. In particular, the fortuitous character of profits is emphasized. At their level of ten and three-quarter billions in 1917, corporation profits before federal taxes were nearly three times as great as in 1914, but have since been declining as costs have risen.

The chief causes of this remarkable increase of profits are found in the increased production and high prices which are regarded as an inevitable by-product of war. The author's attitude toward the popular belief that high profits are the product of profiteering may be summed up in two sentences. "Nothing but our puritanical habit of seeking some criminal intent behind every difficult and undesirable economic situation could have driven us into the state of mind in which the American public finds itself towards those who have enjoyed these profits. Unfortunate indeed is the nation that has no more sensible way of dealing with unusual industrial results than to cast the beneficiaries into jail (pages 46, 47)."

In Chapter V Professor Friday analyzes the course of interest rates and capital accumulation during recent years. He finds the efficient cause of low interest rates during the war period in the unprecedented and unexpected increase in the supply of capital, the annual accumulation of which he estimates to have risen from \$6,500,000,000 in 1913 to \$18,000,000,000 in 1917 and \$22,000,000,000 in 1918, and then to

have declined to \$15,000,000,000 in 1919. These figures, however, include war taxes, which obviously do not represent actual savings and whose effect on interest rates could at most be indirect through reducing the demand for loans below what it must have been without taxes. Out of these estimates and the precedent studies grow certain generalizations of large import for practical economics. "The volume of capital accumulation is affected first and foremost by the volume of productive output." "Other things being equal, capital accumulation is likely to be largest when the share which goes to profits is large." And finally, "If we are to explain the movements in interest rates we must study, not the undervaluation of future goods, or the pain of abstinence, but the business cycle with its fluctuations of production and profits (page 97)."

The chapter on the division of the product is in some respects the most significant of the whole book. Here it is made to appear that capital's share of the value added by industry—that is, the excess of the value of output over that of materials consumed—has progressively declined since 1916, while the share going to the government as taxes and to labor has steadily increased. This result is of course chiefly a by-product of the rise of prices.

On the central question—What caused the rise of prices?—Professor Friday answers that the rise down to 1917 was caused by belligerent Europe's demand for our products. Out of the profits of this trade America purchased European securities, and the whole process of purchase of goods and sale of securities was "lubricated by the expanding bank credit made possible by the large importation of gold" with which "Europe thimble-rigged our credit situation (pages 147, 148)." During the period of our actual participation in the war, government control exercised an important influence over prices, and since the armistice, labor inefficiency has been the prime cause of continued price advances.

Obviously enough, we are here on the threshold of the old controversy over the quantity theory of the value of money. Professor Friday does not elaborate his argument but seems to think that the

quality of the demand is the principal factor in price advances, and that this peculiar quality may be induced by high profits or wages or by the power of buying governments to borrow or tax. But it may certainly be urged that any special potency of the government's demand to affect prices, which may accrue from intensive exercise of its power of taxation, as suggested on page 145, will be largely offset by the concurrent restriction of private demand. The power of banks to check prices and production by restricting credit is granted but as a positive force affecting prices it would appear that only government credit is recognized (pages 145, 225).

With respect to other current explanations of the rise in prices, Professor Friday is equally iconoclastic. In spite of alleged profiteering, profits have steadily fallen; the output of goods did not decline during the war; and labor inefficiency did not lead to higher prices before April 1919. Finally, the excess-profits tax is exonerated of the charges laid at its door. Not only is statistical evidence wanting of a causal relationship running from the tax to prices, but such a connection is inconsistent with the very nature of the tax which falls upon differential profits only, leaving a full 8 per cent on invested capital to be enjoyed free of the tax. And such a rate of exemption is shown by experience to be much above that "normal" or "necessary" profit required to keep men in business. Hence the tax could not have discouraged enterprise or have lifted prices except as it "may have given some seller the courage to move his price up a little earlier, or a little farther, than he would otherwise have done (page 206)."

Two considerations and only two, in the opinion of the reviewer, may be legitimately urged against this conclusion. The first is administrative and does not run to the principle of the tax. In practice there have been such inequalities in the application of the tax as to induce discouragement which the amount of the tax itself could not have caused. Possibly these inequalities are susceptible of remedy. The other consideration is that taxes at high progressive rates tend to reduce the amount of capital available for investment (page 183)

and thereby *in the long run* to increase costs and prices. But this influence could not be relatively, or immediately, important and may not have been mentioned for that reason.

The final chapter of the book considers the possibility of raising real wages as distinguished from money wages as a means toward permanent industrial peace and efficiency. On the basis of our war-time experience, Professor Friday estimates that production might readily be increased 20 per cent through the co-operation of both laborer and employer. This increased output should then be made available for the benefit of the workers. It is conceded that a government guarantee against risk of loss would probably be essential to such a scheme, but it is believed to be worth the cost.

In a sense the book has the defects of its merits. Timeliness must be and no doubt is to a large extent the sufficient excuse for the free use of estimates in default of available facts. Some evidences of haste appear but in the main these are not important. On one or two occasions, however, the haste has resulted in slight misstatements in the text, as when (page 125) it is inferred from an erroneous figure that capital's share in the value added by industry was no greater in 1917 than in 1913.

The proof of the pudding, however, is in the eating. Professor Friday's estimates for 1918 income may now be checked against the returns to the Bureau of Internal Revenue. This substantiates the prediction that 1918 income would be less than that for 1917, although it indicates that the decline was far greater than anticipated.

Statistically speaking, the book is a bit rough. Thus the table on page 15 purports to give the income of *all* corporations but actually gives that for all corporations *reporting net income*; a very different thing since about one-third of all reporting corporations show deficits. Moreover, the table on page 64 gives as net income *after* taxes for the years 1909-1915 the same figures as are given for net income *before* taxes on page 15. It may also be remarked that "net income" as reported by the Commissioner of Internal Revenue is net income as defined in the statute which was

modified in this particular on various occasions; so that the phrase does not mean the same thing for all the years involved, and at no time means quite what would be understood in ordinary financial and accounting usage.

However, it does not appear that these deviations from strict accuracy have at any point impaired the essential argument of the book. Professor Friday's work is of permanent service in an undeveloped and extremely important field.

THE HOUSING PROBLEM

By John J. Clarke, M.A., F.S.S., Accountant of the University of Liverpool, Lecturer to the Workers' Educational Association and Co-operative Union. 544 pp. Sir Isaac Pitman & Sons, Ltd., London.

REVIEWED BY HARRY W. KIMBALL*

The housing problem is as acute in England as in this country, and the importance of its solution has been more widely recognized there than here. The King himself in a recent speech pointed out that the health, happiness, and contentment of the workers depended upon an abundance of decent and sanitary homes, and it is significant that this book emphasizes the effect of a shortage of homes upon the health of the race. Great Britain is much concerned with the physical delinquencies of its people which the war has revealed. If there is to be social progress, disease must be lessened, physical disabilities largely eliminated, and the next generation must be reared under better conditions than exist today. The hope of all this and the surest means of attainment are in better homes.

The history of British legislation dealing with the housing problem is traced from the Royal Commission on Housing of the Poor appointed in 1884 to the Town Planning Act of 1919 which is the latest and most elaborate effort of Parliament to meet the urgent needs of the people. In England because of the density of population many of the housing schemes have had to do with the clearance or improvement of slum areas.

One objection to such clearances is the high value which they indirectly set upon other insanitary areas. Most of the displaced slum dwellers remove to other slums thus forcing the

too high rents up to a higher figure still. These fresh accessions to already overcrowded districts increase the value of this property to the owners, and the purchase price rises in proportion. This method of dealing with slums has encouraged a new industry, viz., the buying up of property in insanitary areas in order to reap a rich harvest of compensation from the municipal pocket.

A large section of the book narrates the experiments and the resulting experience in the erection of working-class houses by (1) private enterprise, (2) building societies, (3) friendly societies, (4) trade unions, (5) co-operative industrial societies, (6) philanthropic societies, (7) employers of labor, (8) societies of public utility, and (9) local authorities. Bournville, where George Cadbury established a model town, has certainly demonstrated that the housing of the working classes in thoroughly good sanitary and even beautiful cottages with gardens attached is quite possible, and that a fair return of 4 per cent can be made to cover taxes, repairs, management, and interest on capital. How wonderfully well this experiment has worked out only a visit to the charming village itself can fully show.

An especially valuable chapter is given to the financial factors and to the new perplexities raised by increased costs of capital and materials, and especially by the restricted output of the workers. Indeed there is scarcely any phase of the housing problem in Great Britain which is not carefully considered. How stupendous this housing

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problem is dawns upon the reader when he learns what the irreducible minimum of a decent home is.

1. It must be weather-proof, should provide complete shelter from heat and cold.

2. It should be well and soundly built, on a site clean and properly drained, of sufficient superficial area.

3. Means should be taken to prevent dampness arising from the soil.

4. It should be constructed of suitable building material, durable, impervious to the weather and reasonably fireproof.

5. Each room should be of sufficient height and cubic capacity, with proper means of ventilation and lighting.

6. An adequate and wholesome water supply—hot and cold—should be available for each house.

7. There should be suitable and separate sanitary accommodation, and properly constructed drainage should be provided.

8. Provision should be made for the prompt and effectual removal of refuse.

9. All those social activities which make towards the securing for its occupants health, education, industry, and recreation should form the environment of such a house.

More than 100 pages of the book is an appendix which gives in full the various sections of the Planning Act of 1919. For anyone who is seeking to become fully informed upon the housing problem in its larger aspects, this book will be of great interest and throw light on many disputed points. The industrial executive will want it for his personal library.

THE CASE FOR CAPITALISM

By Hartley Withers. 255 pp. E. P. Dutton & Co.

REVIEWED BY ARCHER WALL DOUGLAS*

The title betrays both the intent and purpose of the volume, for it is avowedly a brief for capitalism after the fashion of—"with all thy faults I love thee still." Only the faults receive scant mention till the end is nearly reached, when capitalism is duly admonished of its mistake and receives much solemn advice that it mend its ways so that it may produce "a world, not only rich, but full of wise and beautiful and noble men and women, competing and co-operating for the common cause."

The utter seriousness of the author in such statements as above quoted reminds one of the couplet in the Policemen's chorus in the "Pirates of Penzance:"

For it is very evident,
His intentions are well meant.

What a trusting soul the author is may be gathered from the statement that not only is the average capitalist innocent of the socialist charge that he lives by robbing workers of the goods they produce—a

charge long since outlawed among all save soap-box orators—but that he is unaware of his crime and has only to be convinced of it in order to abandon his nefarious practices.

Now this book is not a Sunday School essay, nor yet the 'poesy of a ring, but a supposedly serious attempt to present at least one phase of the most important economic problem of the times.

The volume contains many such beautiful sentiments as the following: "Under an idealistic capitalistic system every worker would be a capitalist and every capitalist would be a worker. And this is an ideal quite within the bounds of possibility." Some such an assertion might be true, if we could eliminate human nature from both sides of the equation. "The Case for Capitalism" opens for defense with the novel and rather bewildering statement that capitalism is essentially democratic. Forsooth, because it depends upon public favor for purchase of its goods and hence is guided in its ways by consideration of the wishes of the multitudinous many.

The counsel for the prosecution immedi-

*Chairman of the Committee on Statistics and Standards of the Chamber of Commerce of the United States.

ately enters demurrer that not so long ago the principal charge was that capital sometimes controlled prices solely in its own interest and for its own benefit.

Herein lies the fatal and inherent weakness of the book. There is no frank acknowledgment that capitalism took advantage of the situation when it was in the saddle, just as human nature does under similar circumstances; but that it showed its inherent strength and adaptability by coming back with undiminished vigor, with a higher morale and a better code of ethics than ever before, and with the realization that human nature in any guise can never be trusted with unaudited and unchecked responsibility. In this respect it differs radically from its ages-old enemy, socialism, which when given free play to put its tenets and beliefs into practice usually makes a mess of its opportunities, and is down-and-out, with no comeback.

Moreover, there is no democracy (at least theoretically) where there is giving and taking of orders; where one obeys and another orders. In representative government there are rulers who make laws and citizens who obey them. The vital difference between this form of obedience and that of capitalism is that in representative government the citizens both choose and depose their own rulers. This condition is not true of capitalism.

Capitalism through much bitter experience has come to realize that the difference between success and failure in industrial life is due almost entirely to the difference in management. Or as a very wise business man once said, "It's *all* in the man." In other words, it is a question of intelligent leadership or of its absence. This is why war cannot be waged successfully by councils of war, nor great organizations managed by boards of directors alone. The serious problem today in the world of capitalism is: How to democratize industry, to make the workers feel that they have a voice and a share in their organization, and yet to retain essential leadership. Whether it can be done, and if so, how to do it. But of this, of the relations of employer and employee, of whether under capitalistic forms of industry the laborer gets a proportionate share of the results of his

labor, and how capital is earnestly and sincerely trying to solve these problems as never before, of all such vital matters there is scant mention. Nor is there intelligent analysis drawn from the times and their development.

Mr. Withers is too busy, instead, citing imaginary examples. Poor Robinson Crusoe, (for he has your sympathy in his new rôle), figures as a capitalist through many pages. It is the same solemn line of "bunk" that is often handed out to freshmen by certain professors of economics to whom undergraduates are most idiotic of human beings. The author is much concerned about socialism and its evil tenets. After disposing of socialism, he introduces a long diatribe by Bernard Shaw on the subject of "Rent." Why something on an economic subject by Shaw should be lugged in, save for its comic aspect, is not easy to understand.

The lawyer-like aspect of the book as a special plea becomes more evident as the book progresses, especially in the chapter devoted to the "Achievements of Capital." Such achievements are numerous enough and obvious enough, but many things are credited to capitalism with which it has about as much to do as have "the flowers that bloom this spring."

Those who believe, on the whole, that capitalism is the best and most workable industrial system yet tried, are not so much interested in constant eulogy, often indiscriminate; in interminable quotations from those, who while students, are often mere theorists, and in lengthy homilies, as in an intelligent analysis of present industrial methods and their tendency. They are interested in the meaning of the constant industrial strife of the day and in its remedy. They want to know whether the present industrial methods tend to produce the kind of citizens necessary to a democratic form of government. Those who realize capitalism is still on trial, and yet believe that it stands the test because it is not a rigid principle but rather a happy opportunism, will feel the need of something far more human, far more searching, far more analytical, far more practical than Mr. Hartley Withers has given in "The Case for Capitalism."

HISTORY OF THE I. W. W.—A STUDY OF AMERICAN SYNDICALISM

By Paul Frederick Brissenden, Sometime Special Agent of the United States Department of Labor. 438 pp. Longmans, Green & Co.

REVIEWED BY JOSEPH W. PIERCY*

"Not so Bad as It is Painted" might be a fitting caption for the verdict reached by Paul Frederick Brissenden, Ph.D., in his "History of the I. W. W.," one of the studies in history, economics, and public law edited by the faculty of political science of Columbia University.

This study of "American Syndicalism," is comprehensive in its scope and authoritative in the material it presents. Besides a general mass of facts which are a part of past and current history, Mr. Brissenden is able to set forth much of the inside workings of this organization because of the valuable assistance in the task of gathering material given him by the secretaries of scores of local unions throughout the country, and because of his experience as special agent of the United States Department of Labor.

The history embraces some three hundred and fifty pages (besides another hundred devoted to valuable appendices and bibliography), tracing the history of the I. W. W., showing its structure, making clear its doctrines, explaining its differences and conflicts with other labor organizations, and exhibiting the dissensions within its own ranks.

The current picture of the I. W. W., according to Mr. Brissenden, "is of a motley horde of hoboes and unskilled laborers who will not work and whose philosophy is a philosophy simply of sabotage and the violent overthrow of 'capitalism,' and whose actions conform to that philosophy." In reality, says the author, the negative or destructive items are only a minor part of the creed, for there are immense possibilities of a constructive sort in the theoretic basis of the I. W. W. The organization's agitators and the Press, he says, have done much to misrepresent it.

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The fundamental creed of the "Wobblies" is that no genuine democracy is possible in industry until those who do the work in a business (from hired president to hired common laborer) control its management. Its cry is for *industrial* unionism instead of *craft* unionism, the founders of the organization having maintained that the centering of the management of industries into fewer and fewer hands rendered the trade unions unable to cope with the "ever-growing power of the employing class;" that between the employing class and the working class was a continual struggle which must go on until the workers of the world organize as a class, "take possession of the earth and the machinery of production and abolish the wage system."

The I. W. W., therefore, strongly opposes the craft type of labor union; the American Federation of Labor is its arch-enemy. It does not admit any identity of interest between employer and employee. Further, trade agreements made by each individual craft with employers prevent labor from acting in unison. The Wobbly leaders point to instances where strikes of union labor in certain industries have been beaten by other union labor because the latter had contracts which it refused to break.

The Industrial Workers of the World was organized in Chicago in June 1905. This first convention had its inception in an informal conference the year before, of six men of prominence in the socialist and labor movement. For some years the organization flourished chiefly in the West, labor there not being so closely knit together as in the East and the Western Federation of Miners coming strongly to its support. Its avowed policy was to organize the unorganized, the unskilled, the floating laborer; but it began to build and continued to build from the old craft unions,

and brought itself into conflict with the already organized, for no local union of the I. W. W. may belong to the American Federation or any other national organization.

Gradually, however, the I. W. W. made some inroads in the East and reached the crest of its power throughout the country in the year 1912, which was the year of the Lawrence strike. That great strike, says Mr. Brissenden, set new fashions in strike methods. It Americanized the words "sabotage," "direct action," and "syndicalism."

Then came a reaction throughout the citizenship of the country and in the ranks of labor itself. The I. W. W. leaders differed as to policies. In 1913 Tom Mann, the well-known English labor leader, visited this country as a supporter of "dual unionism." He was seconded by W. Z. Foster, later a leader in the great steel strike, who advocated taking present organizations and making them over, the famous policy of "boring from within."

In its policy of independent isolation Foster sees the seeds of the organization's decay.

In 1907 the I. W. W. received a severe blow when the Western Federation of Miners seceded from its ranks; the latter having become more conservative. There are present signs of serious divisions in its ranks. The membership as compared with other labor organizations is pitifully small and the membership "turnover" very

large. Conservative estimates of its membership in 1915 put it at 15,000 distributed among 150 local unions.

Appendix IX gives selections from the songs of the I. W. W. One or two, quoted only in part, will do for illustrative purposes:

HALLELUJAH! I'M A BUM!

O! I like my boss,
He's a good friend of mine,
And that's why I'm starving
Out on the picket-line!
Hallelujah! I'm a bum!
Hallelujah! Bum again!
Hallelujah! Give us a hand-out
To revive us again!

DUMP THE BOSSES OFF YOUR BACK

Are you poor, forlorn and hungry?
Are there lots of things you lack?
Is your life made up of misery?
Then dump the bosses off your back.
Are your clothes all patched and tattered?
Are you living in a shack?
Would you have your troubles scattered?
Then dump the bosses off your back.

The second selection is sung to the tune of "Take It to the Lord in Prayer."

Mr. Brissenden's history is a valuable contribution to the study of labor conditions in this country. The author has aimed to give an impartial review, refraining from comment or philosophy except in so far as they were necessary to a clearer exposition of the facts. The style in which the history is presented is simple, clear, and forceful.

LABOR AND THE EMPLOYER

By Samuel Gompers, President of the American Federation of Labor and Vice-President of the American Civic Federation. VII, 320 pp. E. P. Dutton & Co.

REVIEWED BY HENRY J. ALLEN*

Those who pick up this volume under the impression that they are going to peruse a thoughtful and scholarly discussion of the labor movements and of the labor problems in America are sure of some disappointment.

* Governor of Kansas, Topeka, Kansas.

"Labor and the Employer" is not a book. It is a compilation of certain editorials which have appeared since 1887 down to January 1, 1920 in *The American Federationist*. These editorials are interspersed with excerpts from addresses delivered by Samuel Gompers on various occasions and

with extracts from interviews with him in various periodicals. Some miscellaneous items in the book are labeled: (*Excerpt republished by mutual consent as expressing the views of Mr. Gompers*).

Comment already published about this book gives one the impression that "Labor and the Employer" contains something new from the pen of Mr. Gompers. But such an assumption is not warranted for he does not touch in a constructive way any of the modern phases of the labor question.

The compilations take up 311 pages and are divided into eleven chapters. Of these, the first deals with the American Federation of Labor and attempts to give its history, its methods, and to show that its progress has been by evolution, not revolution. The second deals with employers, and employers' organizations; the third, with economics and ethics of high wages; the fourth, with the shorter working day; the fifth, with the union shop and the open shop; the sixth, with child labor and women in industry; the seventh, with unemployment, insurance, and compensation.

Chapter VIII contains extracts and editorials about such problems as: organization of the unskilled, the "color line" in labor, limitation of output, the union label, and jurisdiction disputes. Chapter IX reprints editorials on such subjects as: strikes, boycotts, picketing, violence, graft, and restrictions of labor activities. Chapter X is composed of fragments relating to industrial agreement and considers such topics as: arbitration—compulsory and voluntary, compulsory investigation, incorporation of trade unions, and collective bargaining.

The last chapter is devoted to the labor view of profit-sharing, inefficiency, management, and industrial democracy. From it two quotations may be made to indicate its subject matter and its mode of treatment.

The first, a reprint from *The American Federationist* published May, 1916, deals with profit sharing as follows:

In looking over notes and clippings concerning the moves and opinions of the new profit-sharers, or proposed profit-sharers, the expressions of altruism and philanthropy seem to be "lugged" into the discussion, while the language of calculating business comes to the front frequently and forcibly. The profit-sharers are considering "the

various methods by which employers may bind their employees closer to them"; they are seeking in a deceptive annual dividend to labor "a sound business move"; they wish "the employee to be governed by the same motives that animate the employer"; they invariably "seek efficiency." This language has a purely business-like sound. But wherein it indicates an increased happiness for the masses of labor is not convincing.

Not only on behalf of organized labor but on the part of the general public, one test of its social efficacy may at the outset be offered to the advocates of profit-sharing. It is this: Will the employing profit-sharer take as a basis the union scale of wages and hours in his occupation and the working conditions deemed fair by law and union custom and proceeding from that level offer in addition any of the forms of profits which have been recommended by the professed upholders of profit-sharing? How many names this question would eliminate from the list of its advocates is an estimate which any observer of the movement may make for himself.

Union wages, hours, and conditions form convincing evidence to the masses of wage-workers that the employer is fair and square. He stands before the community simply as a man, not bidding for the doubtful commendatory appellation of philanthropist or apostle of a new society. His actions are above suspicion. He is also a man of business sense; he has all the wage-workers in his line to choose from as employees. His "labor troubles" are, if not at an end, at least plainly confined to a well-known area.

The nomenclature of profit-sharing is singularly rich in equivocal terms. "Loyalty." Is the employee to be wholly loyal to his employer and not first of all loyal to himself? How loyal is an employer to his furnishers of raw material? He is loyal to them only so long as they sell him what he wants at the lowest market rate. "Efficiency." Never to be missed in any lecture or discourse on profit-sharing, this term points to push, grind, and hurry to the exhaustion of the employee, despite its admitted legitimacy up to the point of average physical abilities. "Profits." Is the withholding of 5 or 10 per cent from an employee's wages during the year and returning it to him at an appointed annual date a sharing of profits or a mere restitution of withheld earnings?

The second extract selected for quotation is from the annual report of Mr. Gompers to the American Federation of Labor convention, Atlanta, Ga., November, 1911, and may be said to give his view of scientific management:

As one book after another, or one pamphlet

after another, was issued on the subject, numerous public addresses being made meantime by its supporters, it became more and more evident that the men whose names were chiefly associated with it were not in agreement as to the principles of "efficiency" and its application. It is to be said today that the system has been far from uniformly successful. It has been abandoned in some of the largest works where some years ago it was adopted. The fallacy in the statement that wages were increased by the application of scientific management is now generally recognized. For the time being, after its adoption the wages of a small proportion of a force may be raised, whereas much of the work usually done by skilled men is turned over to unskilled helpers, working far below the wages usually paid to mechanics. It is plain that the system is not adaptable to most of the work done on time. It has been said that in America 50,000 persons were working under the system. If so, the fact cannot be proved by any detailed statistics taken by any census, so far as trade unionists have been able to ascertain. It originated in, and has been chiefly confined to, the workshops of certain large companies which have been notorious employers of non-union and freshly-arrived foreign labor. In large shops it has long been known that certain operations which are performed without variation day after day may only require a low-wage machine attendant, and if the preliminary stages of the work have been systematized, of course the output will be large at a low cost. In small shops, however, and in industries in which the shopwork is not the main factor, the field for the pyramidal labor arrangement, or organization, of scientific management is small. Moreover, the promoters of the system have so extravagantly advertised its claims, and especially their charges of wilful loafing against American laborers, that the general conclusion is that they are mere discoverers of a "mare's nest." They have expected the public to give credence to the absurdity that workmen in general "soldier" to the extent of "one-third or even one-half of a proper day's work." The public has refused to believe this slander on the American workingman, and the workers themselves have everywhere challenged these traducers to bring forward proofs of their assertions. In view of the fact that America's workers are the greatest producers per man and in the aggregate in the whole world, it is an offense against the common sense of men to ask them to believe that, in shops where foremen are ever on the alert, where the penalty for loafing is discharge, where all the men strive to be among those kept on in dull times, where the great majority of them are

responsible fathers or supporting members of families, the workers would by common consent endeavor to deceive and defraud their employers by delivering only half a day's work for a full day's work. All of "Scientific Management" which is built upon this basis of detraction must obviously be disbelieved.

As the discussion now stands, the wage-workers have by far the best of it. The system has not been taken up by employers in general. The number that have shown much interest in it form a very small proportion throughout the country. Railroad managers have treated the estimated possible savings to industry by "efficiency" prophets with contempt. It may also be said that employers have been slow to believe that such wonderful improvements could be made in management as they have proclaimed. In a book issued by one of the authors supporting the system, the statement is made that where one point relating to the wage-earner was to be improved, nine points relating to the employer could be improved. Inasmuch as the advocates of "efficiency" have failed to make much of a success on the one point pertaining to the workshop, we respectfully invite their attention to the nine points in the office department which await their labors.

The verdict on efficiency has been pronounced by society. It has already been relegated to a place on a shelf among the nostrums, sensations, and paraphernalia of magic workers of the past. The American public has not welcomed the spectacle of steel works where, under an inspector, stop-watch in hand, one man is carrying five tons of pig iron where he formerly carried one, or of a bicycle shop where one girl does the work formerly done by three, when she is not carried out fainting, or where in a textile mill a girl is paid for the ordinary day's work after she has striven and strained and almost completed the allotted bonus task of doing two days' work in one.

To the readers of this magazine such quotations, much longer than most of the items, need no explanation, but to many people who know nothing of the aims of scientific management or of the purposes of job analysis they are misleading. They emphasize the point already made that no where in the book does Mr. Gompers touch in a *constructive* way any of the modern phases of the labor question.

The treatment is most fragmentary because it is composed for the most part of small, brief editorials written at various times and having very little correlation.

REVIEWS OF BUSINESS PAMPHLETS

Distribution of Defective and Spoiled Material Costs. By C. H. Smith. National Association of Cost Accountants, Woolworth Building, New York City.

To the cost accountant the problem of defective or rejected material is extremely hard to solve. In reaching a solution of production costs the solution of the problem naturally must include not only the waste of material but also the loss of labor and of the overhead charge.

This pamphlet makes no pretense of being an exhaustive treatment of the subject. Though limiting itself to the methods followed in The Westinghouse Air Brake Company, it does set forth clearly and succinctly a system which may be adapted to meet the needs of other industrial plants.

Any report about defective or spoiled material should, according to Mr. Smith, show such information as follows:

1. Name of worker who calls attention to the defect and his check number
2. Date the form is made out
3. Number of pieces defective or spoiled
4. Number of pieces saved
5. Number of pieces, patterns, or drawing number; and the piece numbers
6. Cause of the defect
7. Last operation paid for on shop order
8. Shop order number on which work was being performed when defect occurred
9. Standing order number of the job, prefixed by the number or letter of the department against which the cost of replacement is to be charged

The department clerk who receives this information should then determine whether the defective or spoiled material is a finished product for which no replacement order should be given, or whether it is a piece in process and ought to be replaced. If the former is the case, the clerk should stamp the report, "Finished Material" and then forward it to the Cost Department. The record of available material on the stock record is reduced by the amount shown on the report, but not until the value of the material is entered on the record. If the defective piece, on the other hand, is something in process, the clerk notes this fact

and the expense order number. This record then goes to the Cost Department.

For the loss in labor, the clerk obtains an estimate from the foreman. All requisitions for replacement material should have the word "Replacement" stamped on the face of the form.

The replacement order should list the following items:

1. Drawing number
2. Piece number
3. Stock order number on which material was being manufactured when found to be defective or spoiled
4. The quantity to be replaced
5. Name of articles
6. The date of issue
7. The letters or numbers of the departments to which the replacement order is issued

When the material has been "machined" the order is marked "Completed" and sent to the department from which the order came, to be filed later in the Cost Department. When material is required from the storesroom to replace material that is defective or spoiled, the clerk makes out a material card.

Mr. Smith suggests that the following be filled out for the use of the Cost Department:

1. The cost of material when due to foundry defects is charged to either the brass or iron foundry, as the case may be
2. The labor on defective castings is charged to the department in which the defect is found
3. If purchased material proved defective the lost labor is charged to the department expense order No. 162 in which the work is found to be defective
4. The actual cost of the material is charged to the Material and Supplies account

Mr. Smith believes that not only material but also labor should be tabulated by departments. Labor, he suggests, should be posted by departments to the Pay-roll Distribution Sheets of which the arrangement by columns is as follows:

1. Department No.
2. A—Orders
3. R—(R, C and several other letters are used to indicate the different production orders)
4. C

5. Total Production Orders
6. Adjustment Account Replacement Expense
7. Net Productive Labor
8. Net Shop Expense
9. Manufacturing Material and Supplies
10. Estimate Shop Expense
11. Betterments
12. Maintenance
13. Total
14. Miscellaneous Orders
15. Development
16. Foundry Iron
17. Foundry Brass
18. Expense
19. Adjustment Account Replacement Expense
20. Total Expense
21. Total Pay-roll

All castings are charged to the Materials and Supplies account at the cost per pound for which they were produced during the month.

Mr. Smith says:

Occasionally in the sale of scrap, a certain amount can properly be credited partly to expense and partly to production. No cost is reported against that portion which is a credit to production. That part which is a credit to expense is so credited by the Cost Department. This same amount is used as the "Scrap Cost of Shipments."

The General Accounting Department reduces the total scrap sales by the "Scrap Cost of Shipments." The net total is used to reduce the Manufacturing Profit on the Operating Statement. Thus, the revenue secured from Sales of Scrap is used to reduce the Manufacturing Profit, instead of being treated as a Miscellaneous sale.

This review can only indicate some of the major steps. For minor details, the reader should consult the pamphlet itself. An excellent feature of the booklet is the reproduction of the various blanks used by The Westinghouse Air Brake Company of which Mr. Smith is Director of Clerical Operation.

"Bank and Public Holidays Throughout the World." Guaranty Trust Company, 140 Broadway, New York.

The fourth annual issue of this helpful booklet contains comparatively few changes in the holidays of the various countries and

colonies. Several new lists, however, have been added for the recent republics in central Europe. The information about the region which formerly comprised the Russian Empire is most scant.

The editor of the booklet has taken particular pains to summarize the facts about the observance of election day as a legal holiday in the United States and its possessions. As so many states fail to have general elections in 1921, these data should prove helpful.

The rule governing the insertion of a holiday is whether or not it is observed by banks and business houses. Many strictly religious holidays, therefore, are omitted in the list given in the booklet.

The Return to Normal. By B. M. Anderson, Jr., Ph.D., Economist of the Chase National Bank, New York City.

This bulletin from the pen of the Economist of the Chase National Bank well supplements the pamphlet "The Fallacy of The Stabilized Dollar" which was reviewed in *Administration* for February.

"The Return to Normal" outlines the abnormal tendencies that produced the crisis of 1920, shows the extent to which the crisis has corrected unsound tendencies, and discusses at length the problems of readjustment which still remain. It is a pamphlet that deserves careful reading.

On the subject of managerial efficiency Dr. Anderson says:

Toward the crest of a boom managerial efficiency always goes down. Managers are harassed by rush orders, by the confusion that comes from a high labor turnover, by difficulties in getting materials in on time, and by a multiplicity of details which do not press them so hard in dull times. Moreover, they find it easy to add increased expenses to selling price, and so are less concerned about the growth of costs. They are easily over-persuaded by enterprising promoters with "ideas to sell" to incur extravagant overhead expenses for advertising and other items, the return from which may be doubtful. They cease to watch small economies. The existence or prospect of large profits makes them relax. Almost before they know it, they find that they have committed themselves to expenditures which the business ought not to bear, and they find that a multitude of rivulets of minor wastes have become a good-sized stream.

Regarding raw materials Dr. Anderson continues:

Special factors made materials in a good many lines rise abnormally high, and this was particularly true of building materials. Ordinarily raw materials rise faster than prices of finished products in a boom time. Imported raw materials did not rise so fast following the latter part of 1919 as did the prices of finished products; but raw materials in cases where foreign competition was absent, rose very rapidly, and this was particularly true of building materials. In some cases local monopolies were able to put building materials to outrageous levels.

On industries with fixed prices he makes this comment:

Especially hard hit were those industries where prices are fixed by law or custom or necessity but where costs, none the less, rose. Typical of these are gold mining, railroading, public utilities, and the like. The early part of 1920 saw difficulties multiplying rapidly for all of these industries. It is these industries which have most to gain from the reaction through which we are passing, since their costs go down while their prices do not go down.

The general domestic readjustment, in Dr. Anderson's opinion involves three major elements: (a) The liquidation of credit (b) The readjustment of our industries (c) The readjustment of our price system.

On industrial readjustment, he speaks as follows:

We have made a partial readjustment through having had a drastic contraction of operations in automobile production and in various other lines producing goods for consumption rather than for further production. But the labor released by these industries is not being absorbed as it should be in other industries. There is still a lull before the beginning of those building operations which virtually all agree are coming and must come. Part of the difficulty here rests in the fact that building costs are still too high. Progress has been made in this matter. Labor efficiency has gone up, with a consequent reduction of labor costs, even apart from a reduction of wage rates. Probably, further substantial wage reductions in the building trades must precede the building boom. Building materials rose far higher than the general average of wholesale prices during the boom. They were 341% of pre-war levels, according to the Bureau of Labor Statistics, at their peak in the months of April and

May, 1920. They were still 274% of pre-war prices in December, 1920. Further reduction would seem to be called for.

One complication in connection with building materials is the excessive freight rates upon them. During the period of priorities and Government control, freight rates on building materials were advanced something like 50% (with variations on particular items). On top of this 50% advance came the recent horizontal general advance in freight rates. The freight item has consequently become a serious factor delaying revival in the building trades. The railroads will probably be well advised to initiate a reduction in freight rates at this point, since they themselves will make more money by moving building materials in large volume than by obtaining higher rates on a small volume of building materials.

A further highly important body of prices that needs rapid readjustment is in iron and steel, and steel products. Following the crisis of 1907 the United States Steel Corporation maintained its prices through the ensuing depression. It was not until early in 1909 that steel prices were cut. At that time, the "Independents" broke away from the schedules of the United States Steel Corporation and initiated drastically lower prices. The United States Steel Corporation was finally forced to follow suit "to protect its customers," and almost immediately a real business revival began. We may hope that there will be no such delay in the readjustment of steel prices in the present situation. The steel situation is very much more competitive than it was in 1907 and 1908.

One of the satisfactory developments of the war period has been the growth of a number of great, strong independent steel companies as competitors of the United States Steel Corporation, and conditions consequently are much more favorable to flexible steel prices which will quickly adjust themselves to the needs of the situation. Building operations and many other operations involving the use of steel are urgently called for, including especially a great use of steel by the railroads. But much lower steel prices would seem to be a necessary pre-condition of this.

The price fabric involves retail prices, wholesale prices, wages, freight rates, money rates, foreign exchange rates, rentals, and a multitude of other items, most of which are final prices for one producer, but are cost prices for another producer. It is necessary that the price readjustment should continue until costs and prices are in equilibrium, before the real resumption of business activity can be expected. The open market, with free, two-sided competition, gives the answer to this problem.

CHRONICLE AND COMMENT

STANDARD SALESMANSHIP

"Knowledge, courtesy, honesty, confidence and perseverance are all that any Standard Oil salesman needs to sell goods because back of him is an organization that will provide the necessary quality and service."

The Stanolind Record, the employees' magazine of the Standard Oil Company of Indiana has thus taken "stock" of its salesmen in a current number:

One of the first essentials to "Good Salesmanship" is Knowledge. Honesty is another essential of "Good Salesmanship." The time is fast approaching when no man will dare misrepresent his goods.

Good business is mutual business. The buyer and seller enter into a kind of partnership. When you have the interests of the dealer at heart, you are paving the way for increased business for your firm.

Nothing will make more friends for you than "Courtesy." Courtesy is the emblem of a gentleman. It indicates quality and good wholesome ancestry. It is not listed on the stock market as having a value, but it pays tremendous dividends.

Confidence is that something in the human that makes you do the things that seem impossible. If a salesman will augment his efforts with confidence he will win. A man with confidence is irresistible. Confidence is the moving force that gains momentum with success. Confidence is the distinction between success and failure.

A FEW SAFETY HINTS

Safety Hints, the employees' magazine of the Whitaker-Glessner Company outlines the cause of accidents in industrial plants:

Ignorance, disobedience, indifference and carelessness result in serious trouble.

Most accidents are due to: Not knowing what is right; Doing what is known to be wrong; Not caring whether the act is right or wrong; Not stopping to think whether it is right or wrong.

Of these—The first is Ignorance. The second is Disobedience. The third is Indifference. The fourth is Carelessness.

Ignorance is an injustice to the employee and employer and inexcusable when displayed in the performance of regular duty. Supervision should be the remedy.

Disobedience deserves reprimand, suspension or dismissal, according to the gravity of the offense and attendant circumstances. Here is where the supervisor's judgment is tested.

Indifference is a serious condition. It is disloyalty and akin to crime. The man who does not care if he causes an accident is worse than a disobedient one. Acquaintance with the men will detect the indifferent.

Carelessness originated more avoidable accidents than any other known cause. What is the remedy?

It is to induce men to think—think before acting. Think which is the safe way. Think whether it endangers them individually. Think whether it imperils their fellow employees. Think whether it risks the company's property.

Remember: Safe men, plus safe methods, plus safe appliances equal 100 per cent safety.

CLOSING OPEN SHOPS

Ax-I-Dent-Ax, employee's magazine of the United States Smelting, Refining and Mining Company, has an editorial in a current number on "How to get closed shops."

The American Federation of Labor need not raise \$20,000,000 or any other sum to combat what it alleges is a conspiracy to overthrow the "closed shop."

It can defeat the open shop in a simpler and less costly way. The opportunity beckons as it probably never has done before. It knocks on the door and asks for the privilege to enter.

The simple way to defeat the open shop is for unionists to demonstrate their ability and willingness to make it economically advantageous to employ unionists exclusively. If open-shop employers knew that the members of organized labor produced more or better for the same wages they would not long talk about the abstract right of men to belong or not to belong to unions.

The exposed flank of the unions, something that invites attack, is their aversion to lowering production costs. They argue that in quality and quantity what they give is the cheapest but avoid actual tests. One of the commonest complaints against unions is that they insist on rules which increase production costs and prescribe regulations which at bottom are as much against their own interest as the interest of employer or public.

If the Federation of Labor raises a large fund it would benefit unionism to devote part of it to educating all workers to see that the way to have

increased wages is to increase production per human unit employed. When there is practical acceptance of the principle that production controls compensation no shops are likely to open. When union labor is the cheapest and most efficient, it will quickly gain a monopoly.

"WRITE IT RIGHT"

What makes a good letter?

At the January meeting of the Engineering Advertisers' Association of Chicago, Charles H. Mackintosh answered:

The most important single item in the makeup of a letter is sincerity. A good letter complete, logical, concise, forceful, neat and accurate, but all of these things count for little if it is not sincere.

Much time would be saved by the writer, stenographer, and the recipient of letters if people who write letters would acquaint themselves with a knowledge of the subject from the viewpoint of the recipient.

Mr. Mackintosh said that a saving of about one cent a letter can be made by avoiding the use of unnecessary and obsolete words and phrases. In that way one concern alone saved a thousand dollars within a comparatively short time.

RATIONS FOR EMPLOYEES

The Nashville, Chattanooga and St. Louis Railroad has formulated a practical plan for rationing the maintenance of employees on the road, thereby increasing the efficiency of the men and reducing labor turnover.

At a meeting of The American Railway Bridge and Builders' Association, the railroad submitted a paper which read in part:

In 1918 the cost of boarding the men had run far beyond the amount received by the company for such board. Not wishing to raise the charge for board, a study was made in the chief engineer's office to see what economies might be effected by a system of centralized purchasing and distribution and strict rationing. The study indicated that no increase in charge for board would be necessary and that substantial savings would be effected at the then existing rates. The purchase of dining car and subsistence supplies was, therefore, assigned to the purchasing agent, and a commissary agent was appointed to look after it.

The ration allowance was estimated largely from the past average consumption of various articles and was checked with prevailing United States army rations. By proper checking systems accounts are kept of the requisitions for supplies sent daily by the foremen to division engineers. The division engineer prepares a summary of all supplies ordered, sending carbon copies to the purchasing agent and to the chief engineer. Every purchase made is thus listed, checked, and itemized.

The circular announcing the plan describes the duties of the commissary agent as follows:

To adopt the most economical methods of purchasing and distributing.

To keep in touch with the different departments, by personal investigation, to see that no waste is occasioned in handling at the point of consumption.

To see that cook and dining cars are kept in a sanitary condition.

To keep a check on all requisitions to see that they conform to the balanced ration and subsistence reports.

To understand that he has no authority to issue orders to employees of above departments, but is to act in an advisory capacity and, when conditions needing correction are not given prompt attention, to report the facts to the purchasing agent.

An interesting feature of the plan is that a lunch-club is operated in the purchasing department and the food for it is furnished at cost by the commissary agent. Thus a practical test of the quality of all foodstuffs purchased is made and none is sent out that is not known to be of the quality specified and in good condition.

LESSONS IN ENGLISH

Every English-speaking man in the A. C. Lawrence Leather Company has been asked to co-operate in the city-wide plan to teach English to foreigners.

The A. C. L. "written by, for and about our fellow-workers," comments on the plan as follows:

The Americanization Committee is anxious to enlist the assistance of every English-speaking man on the plant in conducting the school for foreign-born employes this season. They want every man who cannot read and write English

to give up two hours a week to learn the language of the country in which they live. You can help us in this task by encouraging the men in your department to come over to school on the opening afternoon and evening and enroll in one of the classes. By doing this you will be materially aiding your non-English-speaking friend, your company and the country in which you live.

So long as we have people in our plant who do not know our language we can never be absolutely sure of our safety, for instructions may be wrongly interpreted and hazards left that may endanger the life and limb of several men; we can never get the fullest output per man in any department, for much time will be wasted in unnecessary supervision and correction of errors made by those ignorant of our written instructions; we can never fully enjoy the comradeship of our fellow-workmen, because that tremendous barrier of language will stand in the way of exchange of ideas, through which we grow richer in experience.

Citizenship classes are held under the supervision of the plant so that their employees can get their papers and learn the fundamentals of good citizenship.

A foremen's training class is held weekly in order to give each foreman a keen realization of his particular "job" and to help him put across, in the most efficient manner, the teamwork necessary in a great industrial game.

Through this class the foreman or his assistant is given a chance to see his job from another angle and the characteristics helpful or injurious are forcibly brought to his attention. It is really a "taking account of stock" of his strength and weaknesses, bringing out through self analysis what is most needed in his department to make it eligible to remain in this big game of American business.

CO-OPERATION BOARD

The Board of Co-operation is a feature of the Berkey and Gay Furniture Co. It is composed of delegates from the various departments of the factory and office and meets monthly to discuss and remedy any grievance of the employees of the company.

For example, ten employees of the plant complained because of the unsanitary condition on the second floor of the west wing of the building caused by stale glue being emptied outside the windows. This complaint was brought up to the Board of

Co-operation and action taken by the board to remedy the practice. The board, in order to expedite its working operations, is divided up into committees. Some of these committees are the Working Conditions Committee, Production Committee, Improvement Committee, etc.

READABLE REPORTS

The Corn Exchange Bank of New York City publishes its financial statement in such a way that almost anyone can understand it. For clearness it is a model which might well be adopted by all financial institutions in their reports for popular distribution.

Such a report can be printed on a little card which fits the vest pocket.

Omitting the dollars and cents, the report of the Corn Exchange Bank reads:

THE BANK OWES TO DEPOSITORS

A conservative banker always has this indebtedness in mind, and he arranges his assets so as to be able to meet any request for payment.

For this purpose we have:

I. CASH
(Gold, Bank Notes and Specie) and
with legal depositories, returnable on
demand.

II. CHECKS ON OTHER BANKS
Payable in one day.

III. U. S. GOVERNMENT SECURITIES . . .

IV. LOANS TO INDIVIDUALS AND CORPORATIONS
Payable when we ask for it, secured by
collateral of greater value than the
loans.

V. BONDS
Of Railroads and other corporations, of
first quality and easily salable.

VI. LOANS
Payable in less than three months on
the average, largely secured by col-
lateral.

VII. BONDS AND MORTGAGES AND REAL ESTATE

VIII. TWENTY-TWO BANKING HOUSES . . .
All located in New York City.

TOTAL TO MEET INDEBTEDNESS

IX. THIS LEAVES A SURPLUS OF
Which becomes the property of the
Stockholders after the debts to the de-
positors are paid, and is a guarantee
fund upon which we solicit new deposits
and retain those which have been lodged
with us for many years.

ADMINISTRATION

The Journal of Business Analysis and Control

MAY, 1921

LUCK AND CHANCE IN SUCCESS AND FAILURE

BY RICHARD T. ELY*

DO you prefer to say luck and chance, or conjuncture? or would you like better to say conjunctural gains and losses? and shall we add speculation? Our complete title would then be this: "Conjunctural Gains and Losses and the Relation of Conjuncture to Speculation." The business man may say, "academic, professorial, why can't these highbrows talk plain American English?"

Well, if you prefer, let us say luck and chance: but the trouble is that in business luck and chance are not quite accurate. We mean luck and chance and something else. Now, if that something is of grave concern to us in understanding the world we live in and helping to adjust ourselves to realities, why not give it its proper name and become acquainted with the thing? This procedure has good precedent in Holy Writ, for it goes back to the Garden of Eden where we are told "the Lord God formed every beast of the field, and every fowl of the air, and brought them to Adam to see what he would call them; and whatsoever Adam called every living creature, that was the name thereof."

Now, in these days we do not find many new animals, but at times we stumble upon more or less new, or, at any rate, unfamiliar ideas, brought to us or emphasized by the ever changing and evolving economic world in which we live, move, and have our being. Therefore, let us not be made afraid by a name.

Mr. Business Man knows this fellow, Mr. Conjuncture. Sometimes he is jolly and you will like him: sometimes he is morose and brings trouble: but it is worth your while to know something about him, as he may bring you great fortune or he may ruin you. Mr. Conjuncture knows Mr. Business Man. He is a pretty good fellow; not at all what the ogre, the yellow press and the demagogue pretend to think he is.

Well, we shall call our article "Luck and Chance," even if not quite accurate, but we begin with an effort to tell just what we mean by conjuncture. Conjuncture is defined by the present author as follows:

In the distribution of wealth and income individual conjuncture means the distribution of that share of the social wealth and income of society which takes place to a greater or less extent within

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the realm of chance and luck and is therefore only partially within the control of the individual. Social conjuncture means distribution beyond social control.

In each case we could have a classification of conjuncture into *actual conjuncture* and *necessary conjuncture*, because the element of conjuncture is capable of a certain amount of control which will lessen its operation, and this control must increase because with the advance of civilization we gain greater control over natural and social forces. Conjuncture brings gains and losses, sometimes so closely connected that we cannot tell the net gain or loss, individual or social, until a certain operation or a certain cycle is complete. The World War and post-World War periods afford illustration. Many a merchant made great and unforeseen gains as also did many a farmer and many a mechanic, during the rising prices for which they were in no way more responsible than for the blowing of the wind; but now during the period of falling prices and stagnation, they must take losses.

II

Conjunctural gains and losses, then, move in cycles, and the business man faces disaster who estimates his gains as complete and solid, available for whatsoever purpose he pleases before the close of the cycle. Many a man who a year ago was indulging in luxuries, because he looked upon himself as wealthy, is now worried about the money with which to pay for necessities. We may turn to the excellently written monthly *Bulletin of the National City Bank* of New York in the February, 1921, issue for illustration:

The number of reported bankruptcies has increased, but has not been alarming, and the cases have been mainly of small concerns of mushroom growth, who extended

their business rapidly upon small capital while prices were rising and did not have the reserve resources to meet the losses that were inevitable when reverses came. The substantial business structure of the country is unshaken, and whatever anxiety there may have been upon that score has been relieved.

This does not mean that heavy losses have not been taken. Only the fortunate or sagacious few who began to trim their sails early in the year, and deliberately restricted their business, escaped. Some made good profits in the first six or nine months and lost most of them in the last three months, while many have come out of the year not only without a return upon the investment, but with an impairment of capital. Official price regulation, which curtailed profits while prices were rising, and prevented the creation of a cushion to absorb the losses while prices were falling, is held largely responsible for the dissipation of capital. Heavy taxation, of course, had a similar effect.

But it is not only the business man that must carefully study cycles; wise public policy will be based on appreciation of chance and luck in their cyclical movements. The people of the United States are suffering from many ailments, but one cause of distress is, failure to appreciate the fact that luck and chance must complete their cycles before the accounts can be closed. Taxation affords illustration. If we take all the surplus earned under conditions of conjuncture, favorable to the business man, we ruin him when reaction comes and we injure all classes because we dry up the sources of public revenue and deprive the leaders of the business world of their power to keep the wheels of industry moving. Here we touch upon a rich field for the demagogue who fills the air with shouts of profiteer, hurled at every man who during the ascending cycles of prosperity made money, and he is too ignorant or unscrupulous to ask us to see how the alleged profiteer may

stand at the close of the descending cycle of depression and loss.

The demagogue wants to take all super-gains of the business man in addition to covering him with obloquy and is quite willing to let him sweat blood when adversity comes. But it is perfectly obvious to the sane and honest man that if every gain brought by a happy combination of circumstances in conjuncture is to be taken away from the business man, and he has to bear all the losses in times of stress and storm, bankruptcy is the inevitable end. It is not denied that there is such a thing as profiteering, which means a grasping for excessive profits and a disregard of one's fellow man; but this is a distinct subject, and after saying that it is far less prevalent than most of us think, and when it does occur is of a different nature than ordinarily supposed and requires different treatment from the quack prescriptions handed out by cheap politicians, we may dismiss it.

Is it not already obvious that in discussing conjuncture we are dealing with something of prime importance to the business world? To use words taken from the prospectus announcing *Administration*, conjuncture is one of "the serious facts upon an understanding of which effective business control must rest." A careful analysis of the forces controlling the business world reveals conjuncture as one of the most fundamental of these forces, although very strangely overlooked; possibly in part because it is not flattering to our vanity to think that our success may not be due wholly to our own merit, possibly in part because we have a half-conscious fear that it is socially dangerous to acknowledge that those who fail are only partially responsible for their failure. But it is best to know the facts as they really are. Let us then consider certain very obvious

fluctuations of fortune for which the individual has no responsibility whatever, neglecting the view of certain philosophers like Voltaire that the history of the world is the history of chance, a plausible view for those who are unwilling to acknowledge a governing Providence.

III

The writer here gives a typical illustration from his personal observation, and every reader can recall similar cases which have come within his own knowledge.

Two men of like diligence and capital bought farms in Western New York. One being older had married and was ready to begin farming operations about the time the Civil War began, but before prices had begun to rise. He got fairly started and reaped the advantage of the high Civil War period and post-Civil War period. By the time falling prices came he had paid for his farm and was in a position to buy other farms during the period of falling prices. The other man, being younger, married and was ready to begin farming operations at the peak of the high prices brought on by the Civil War, and before he had got a firm foothold prices began to tumble. Like the first man, he worked day and night, practiced thrift, but could not overcome adverse conditions. Ultimately, the mortgage on his farm came to have pretty nearly the value of the whole farm. The first man died prosperous at a ripe age; the second died young and broken-hearted. The essential difference was that one was born at one time and another at a different time. One man had no more to do with bringing on the Civil War than the other, and practically neither one had any more control over the events that led to the Civil War than

over the movements of the tide. Nor is there any reason to think that one had more insight into price movements than the other.

Thousands of illustrations of this same nature can be given, taken from the years that have passed since 1914. Varied illustrations taken from his own experience or that of his associates will occur to the thoughtful reader. One man goes into a profession at a time when expansion begins and another at a time when contraction begins. One is fortunate, the other unfortunate, and very often one has no more foresight than the other.

IV

The World War affords illustration of conjuncture in the most violent price changes and wage increases of which we have record. During this period the middle classes, at the same time the relatively silent classes, suffered greatly; but in England even they were aroused to protest and action. They paraded the streets protesting discriminations made against them as compared with wage-earners. Protests of this kind are heard more and more frequently. Wages have moved far more rapidly than salaries and interest rates. Even before the World War we had in Germany a Middle Class Association (*Mittelstandskongress*) to guard the interests of the middle classes, the intellectuals, the *intelligentsia*; who felt that they were being ground to pieces between the upper millstone of the wealthy classes, setting higher and higher standards of expenditures, and the nether millstone of the wage-earners with their increasing demands for higher wages, shorter hours, and frequently diminished services. Conjuncture of modern times has been felt to be against the middle classes, and,

in fact, in the great Russian conflict they have perished under the malevolence of Bolshevism.

An illustration taken from the writer's observation when in Munich, Germany, in 1913, has sufficient significance to warrant citing.

The writer with his family lived with a German lady, the widow of an artist, who had two servants. The cook was suddenly obliged to have a hospital treatment; she went to the hospital provided for her class. Through the working man's insurance her expenses were paid and she returned without pecuniary loss and really refreshed by her period of rest. As chance would have it, she had no sooner returned than the second servant was obliged to go to the hospital and had a like experience. Neither one suffered any severe pecuniary loss. As luck would have it, the second girl had scarcely returned when the landlady fell ill and was obliged to go to the hospital. This was, for her, very serious, for she was not covered by any public fund and had to pay for her hospital care out of her scanty earnings.

There are many causes of conjunctural disturbances, but chief of them all and the most disastrous is war. The World War, already several times cited, is so recent that with a little reflection abundant illustrations will occur to every intelligent person and especially to every man who is engaged in business in a large way. Think, for example, of those who had copper to sell and those who were in a position to be called upon to manufacture munitions. In each there were large gains, due to world movements, for which the fortunate recipients of gain were no more responsible than the unborn babe.

There are other lesser causes which in the aggregate have very great significance. One very minor cause, but often cited, is the demand for

black cloth in time of universal mourning. Seasonal fluctuations bring gain and loss, and they are only partially under control. Sometimes certain tastes and habits develop quickly and those who are already firmly established in such lines of activity as to cater to these habits and tastes will reap unanticipated gains. So far as they have helped to develop these habits and tastes, the gains would not be conjunctural, but very often there will be a sudden development of tastes and habits entirely unanticipated by those who suffer loss or reap gains. Technical changes, inventions, new processes, new laws, produce conjunctural gains and losses.

Does conjuncture increase with economic evolution? The first answer of most readers will probably be yes, but in all probability it is an incorrect answer. We find in early times and now in countries in a primitive economic condition, like China, the widest fluctuations in the prices of agricultural products and other necessities. One will find abundance and low prices in one region when three hundred miles away people are starving. In ancient times there were the greatest differences in wealth, and while we have not statistical data to enable us to make careful comparisons we can say at least that it is probable they were relatively far greater in earlier times than now. Read the Bible stories of the wealth of Job and other patriarchs and remember that at the same time there were people in direst poverty, and slavery was an accepted institution. India and China know men of enormous wealth who spend most lavishly, while the great masses of people live on sums which mean insufficient nourishment, clothing and shelter, partial starvation, and frequently actual starvation. Go to Europe and we find medieval castles,

which were once the scenes of great gaiety and lavish entertainment, now unoccupied, because no purchaser or renter with sufficient funds to finance their upkeep is found.

On the other hand, with the extension of markets until our economic life becomes international and until we are approaching a world economy, the fluctuations, while probably less violent, cover a wider and wider area.

V

We have already discussed the hard struggle of the middle classes for survival, especially the intellectual classes; those classes who make the best social use of wealth and income and are the best social leaders, who have the highest ideals, and from whom come, in largest measure, the inspirers of social progress.

The evils of conjuncture are, on the one hand, due to quickly acquired wealth with the lavish and even senseless and demoralizing expenditures so much in evidence in recent years and, on the other, to the sudden falling into poverty. Swollen fortunes with display and ostentation of the new rich are everywhere evident, but more hidden are the struggles of the middle classes. The gilded youth may fill the front page of our daily press with wantonness, but the boys and girls who are unable to go to college do not get into the papers at all.

More than this can be said. There is strong ground for thinking that old wealth is better than new wealth in its social influences. We may contrast in England and likewise in Mexico new and old owners of great estates, and those who are familiar with both countries will concede that the old are better than the new. Nothing is more dreaded by the tenant-farmer in England than a new landlord who has

suddenly acquired wealth; and those who are most familiar with Mexico will tell us that on the old estates conditions are not particularly bad. For this there are probably two reasons. The current statement "three generations from shirt sleeves to shirt sleeves," is not absolutely true; but it is true that there is a weeding out process which reduces in many cases to an old level those who have suddenly acquired wealth and who are socially unfit, while, moreover, we have the mellowing processes of time. In the case of sudden and undeserved poverty we have a loss of the results of this mellowing process, a loss of what society has paid for the acquisition of certain socially desirable qualities. What was a social asset becomes a social loss.

The pain of falling down is greater than the pleasure of going up so there is a loss on the whole in human happiness. This principle is made by Bentham the foundation of the sacredness of property. He calls it "the non-disappointment principle." The writer gives a quotation at some length from a treatment of Bentham's philosophy, which although written from a different point of view, is an argument for the social reduction and avoidance, so far as may be, of conjuncture.

The principle, that private interests should yield to the public good, he thus so far modified, that from the amount of any public good done, he deducted whatever private interest might be injured. In estimating the evils done to individuals, he examined minutely the pain caused by disappointment, and found it to be, on arithmetical principles, greater in the average case than the pleasure of acquisition, and than the pain (if it can be so called) of non-acquisition. The income of A is taken from him and given to B—A loses his all, but B gets merely an addition to what he had before. The whole pleasure in the possession of a source of livelihood

is removed from the one; the other only receives the secondary pleasure of an increase. Let A's income be dispersed among the public—he loses all, and is eminently unhappy; while that which constituted the source of his former content is distributed in portions so minute, that the amount of happiness produced by it may be scarcely perceptible. On the other hand, so long as A is left in the enjoyment of his income, according to the prospects held out to himself and to society at large, from the first, as no man expected to obtain any of it, no one is disappointed by its not being distributed, and he himself is content. The non-disappointment principle is the great foundation of the sacredness of property. More injury than good is done, by allowing either individuals, or the public at large, to interfere with that which a man has, under the sanction of the laws, been allowed to call his own. The pain of disappointment to the proprietor is the primary evil of attacks on property. The secondary evil is the alarm to society at large, the dread which each individual has, that he too may be the victim of spoliation.

Like the other great principles expounded by our Author, the non-disappointment principle pervades society in all its acts; but it was his task, by a minute analysis of its principle and operation, to discover cases in which its application had been neglected and misunderstood. In the estimate of the incidence of good and evil on society at large, he saw that there was a clear gain in a government following out the principle, that when a man steadily and honestly follows his calling, and makes his livelihood by it, he should feel the assurance, that no act of the government of his country shall remove it from him. But he found a secondary advantage in the principle of compensation: It has a tendency to remove the opposition perpetually operating against improvement, in the sinister interests of those who benefit by abuses. Pay off the incumbents, is thus a liberal policy, by which those who are most conversant with the operation of any institution, are relieved of a temptation to overlook or defend its defects. . . .

It is a task of civilization to reduce conjuncture and this is being done in multitudes of ways. Improved means of communication and transport do this, as well as publicity of corporate accounts, responsibility of directors of corporations, sound banking, sound money, etc. Every field of economic activity shows, on the one hand, progress and, on the other, much still to be accomplished. In agriculture we have great improvement due to the breeding of plants and animals and to the introduction of new crops better adapted to special localities than the crops they displace. In agriculture the great obvious thing to be done is to put out of use that great amount of land that is unfit for agricultural use, which is in economics called sub-marginal land. There is a vast amount of land in cultivation and being brought into cultivation which cannot afford a decent livelihood to the farmer. Those who want to raise prices so that farmers on poor land will get a good living are going at the thing from the wrong end. To accomplish what is desired through prices would mean that the rest of us would have to starve to death or suffer dire want. If wheat were \$15 a bushel, we would still have farmers producing at a loss, because they are cultivating land which is unfit for agricultural purposes.

Insurance is a stabilizer, and cultivation of foresight and insight enables us to lessen conjuncture. Indeed, if one man has more insight and foresight than his fellows, he will reap gains where others lose because he will make inroads on the realm of conjuncture. We have many social agencies at work, helping us to forecast the future. We have the statistical services of government, our *Crop Reporter*, *Weather Bureau Reports*, and we are just starting our Institute for Research in Land Economics, one aim of which

is to enable us to anticipate with the highest possible degree of probability over a series of years the prices of agricultural products through an investigation into the land areas being brought into use over all the world, correlating them with the growth of population. Prices of agricultural products find expression sooner or later in land values, and these are largely, in the final analysis, the basis of all credit. It would have been quite possible, by these methods and others which cannot be described here, to have forecast pretty accurately the fall of agricultural prices with their results during the present year; and, indeed, the writer in an address early in September 1920, before the Farm Mortgage Bankers Association of America, was able to give warning.

Thrift, of course, enables men to stand shock and to weather storms. *The Bulletin of the National City Bank* already referred to brings this out clearly. It is stated in this Bulletin that the leading business concerns of the country had been building up reserves for years to prepare for conjunctural changes. The business man had learned lessons from previous crises and better preparation than ever before had been made. In addition to this, the improved bank system was a great factor.

VI

Relative rôles Played To-day by Conjuncture and Economic Merit in Economic Success or Relationship between Conjuncture and Economic Demerit in Economic Failure.

It is impossible to do more than make a guess and perhaps no two would agree in the guess. Professor F. C. Sharp says,¹ "luck plays at least

¹ Taken from "Some Problems of Fair Competition," *The International Journal of Ethics*, January, 1921.

as large a part in success as the cards do in determining success in an even-ing's game of cards." This is not an altogether bad comparison. Skill tells in spite of luck, yet at times luck seems to carry everything before it. In the long run, luck at cards will be equal; but life is only a short run, as has been well said.

Professor Sharp speaks of these conditions of success: "intellectual ability, willingness and power to work," character, financial resources—the latter often due to nothing but luck, for example, having a rich father or father-in-law, or the good fortune of being "first on the ground, as in the exploitation of much of the natural wealth of this country."

VII

It is necessary to connect and contrast conjuncture with speculation to understand fully the part it plays in distribution. Conjuncture is largely social. It is concerned with widely operating general causes, bringing about price changes as their most important effect and thus affecting not only the values of property, but also the values of services. Drought, flood, and, above all, war are causes. Its risks are not of such a kind as to be readily insurable, and this is the case with a good deal of conjuncture when risk affects a whole group and, therefore, the mutualism of insurance doesn't work. We have risk-taking in

production, and the entrepreneur takes risks, and as he overcomes risks he makes gains. Do we have a class of men who assume conjuncture? Just in so far as we begin to conquer conjuncture, we find in the field gained, the speculator who is one kind of entrepreneur. It is his business to fight conjuncture and in so far as he does this he is a producer, because he helps keep things from a time when less needed to a time more needed, thus creating time utilities; and from a place whereless needed to a place where more needed, thus creating place utilities. But illustrations already given show that a large realm of uninsurable conjuncture must remain. The mere fact that a man is born at a certain time may make the difference between fortune and poverty, as we have seen.

If a speculator increases conjuncture by cornering and monopolizing the market, and thus increases instead of decreasing price fluctuation, he is not a producer but a destroyer of values and is criminal in intent, if not in law. But to corner the market in the case of a great staple is extremely difficult and gains are made by the true economic speculator in spreading gains and losses over longer periods than they would otherwise cover. The man who merely bets on upward and downward movements of prices is in economic effect and ethically if not legally a gambler, and is economically and socially a destroyer.

STATISTICS IN BUSINESS

BY WALTER B. COKELL*

WHEN figures are employed in argument or to make out a case the debater who is getting the worst of it is apt to contend that statistics are—just statistics. Abuse, however, is neither argument nor proof. It is not the use but the abuse of figures that has given statistics a bad name. As a matter of fact all business is based on statistics. Business could not be carried on without them for the summary of the accounting records presented in a financial statement is merely information presented in statistical form.

Statistics are good or bad according to the amount of care given in their collection, correlation, and presentation. They are useful only in so far as they are rightly interpreted. Even such a simple thing as a decimal point may sometimes create a misconception of the facts as is illustrated by the forethought of the brewer who made a lot of money for himself by putting out a brand which he called the .275. The searchers after kick flocked to that brand.

"Lookit," they said, "here's a guy what's brewing stuff with something to it. See the label! Two-seventy-five! That's what we used to get in the good old days."

In vain his competitors protested that beer of .275 per cent alcoholic content was weaker than any other near beer. In vain they pointed out that the decimal point was in the wrong place, that it was .275 instead of 2.75.

In almost all businesses sporadic and infrequent use is made of statistics; as

when an executive happens to want some special information or where special attention is being directed for a brief period to some phase of business activity; and one or more departments of a concern may keep such statistical records as are necessary for its guidance. But the continuous use of statistics as a part of the records- and report-making divisions of an accounting department is still extremely limited. Perhaps not more than five per cent of the business firms in this country make any systematic use of statistics in this way.

The modern executive spends most of his working hours in an office unacquainted by lack of first-hand knowledge and personal inspection with the results of the activities of the business, even though it may be a compact unit in one building. But most corporations, even of moderate size, maintain their various units in different localities and often operate in several states. It is therefore obvious that if effective control is to be secured, accurate information of the operations of every department, no matter how remote from headquarters, must be promptly furnished to the management in orderly manner so that conclusions can be formed quickly.

In all investigations and analyses statistics play a most important part in recording and summarizing the data secured. The higher executives may not be interested in the more detailed figures, but nevertheless, some of the summarized figures are of the greatest aid to even the most important of executives.

In selling organizations of any size a

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large amount of data is necessary to direct intelligently the work of salesmen. The large packing houses in the Middle West, for instance, carefully compare their detailed cost figures with their sales statistics to determine which of their lines are most profitable and which among their many hundred products their salesmen can most advantageously push. It has frequently happened that the products on which handsome profits were thought to have been made, when submitted to careful analysis, proved to be the very ones upon which losses were incurred.

Records of sales in various territories as made by various salesmen or of the same salesmen in the same or different territories over a period of time are often an index of efficiency. In nearly every commercial business certain statistics are also used as a measure of present efficiency or as a means of determining future possibilities. For instance, the sales of all or certain lines of a concern's product may be compared with the total population, or perhaps with certain classes of the population. Statistics showing the number of farms, by size, crops of grain, etc., would be useful information for agricultural machinery companies or fertilizer companies in studying their markets.

II

An analysis of the census of manufactures will yield a wealth of information relative to the distribution of various industries about the country and the production of most lines of manufactured goods. While some of the reports published by the federal government are suitable only for broad surveys, there are many special reports issued by governmental or private agencies which bear on individual industries. These give the results of exhaustive inquiries and indicate the

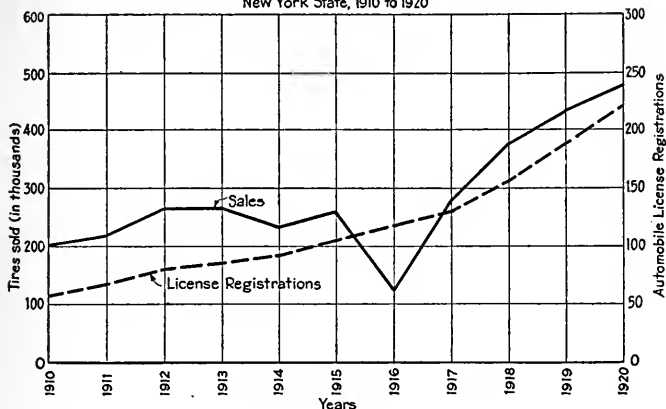
location and size of manufacturing plants, the sources of supply of raw material and labor, and the extent of the market. Such information is of prime importance to a sales organization endeavoring to increase sales. Even simple statements of sales in the various districts of the field will, if rendered promptly and frequently, be a great aid to an executive in feeling the pulse of trade.

In many organizations quotas are established at the beginning of a season for the different branch offices or salesmen. The home office informs each salesman of the minimum sales of each product he is expected to make. These quotas or "shooting marks" are established by distributing over the various territories, usually on a basis of past performance, the total volume of business the concern hopes to secure. Reports are then issued showing how the current sales of all products compare with the quota expected to date.

Manufacturers of tires and auto accessories often compare the sales of their product in certain territories with the automobile license registration, in this way determining the size of their market and the possibilities of increasing sales therein.

Chart I shows a comparison of auto tire sales with license registrations. By the study of such a chart the manufacturer learns to what degree his sales have kept pace with the growth in the use of automobiles. The slump in his sales in 1914, for instance, may have been due to the inability to secure raw material on account of the breaking out of the war. This would have caused his sales in all territories to fall off. The large decrease in sales in New York State in 1916 may have been due to large war orders from abroad tying up a major portion of his output. In the study of such a chart all the factors influencing the condi-

X AUTO TIRE COMPANY

Comparison of sales of tires with automobile license registrations
New York State, 1910 to 1920

tions must be known if correct deductions are to be drawn from the statistics and if the figures are to be accurately interpreted.

Elaborate questionnaires are often prepared by special investigators or by the regular sales forces to gather information relative to a particular market, i.e., as to the needs and tastes of the public and as to the methods of securing more customers.

In selling campaigns it is advantageous to keep statistics of the progress made, to stimulate business. For instance, a corporation may pay a monthly bonus to salesmen for any excess in sales over the normal increase ordinarily to be expected from the growth of the company. The main problem is then to determine what would be the normal sales for the period if no special drive were being made. The average sales would probably be computed for several years past and on the basis of these figures a total estimated amount of normal sales for the coming year would be computed, figur-

ing the same per cent of increase over the previous year as had been made annually in the past. As the volume of sales in most businesses fluctuates from month to month, due to seasonal conditions, it would be necessary to divide the total estimated normal sales for the coming year on the basis of the proportions which had come in each month in the past, using the results of several years as a basis. The estimated normal sales per month would have to be split up over the territory of the company, probably on the same basis as outlined above, but modified where local conditions in certain territories seemed to require more or less arbitrary adjustments. Bonuses would then be paid for any increase of actual sales above these normal figures.

III

The field of financial statistics is perhaps the broadest of all fields, and data of this character are used daily by most executives. Mercantile agencies

issue weekly statements of market conditions which are supported by statistics of the volume of trade, prices of commodities, business failures, pig-iron production, building permits, and the like. Wall Street operators and financial publishers issue daily or weekly summaries of stock-market conditions. In these are found statistics of the sales and prices of stocks and bonds, money rates, bank clearings, railroad earnings, foreign trade, and all figures of business activity which are of value to an executive. Many banking and brokerage institutions also issue economic analyses of trade conditions in general, with more or less detailed studies of activities in various industries. The backbone of some, if not most, of these analyses is statistics, of which the main part of the reading matter is the interpretation thereof.

Some of the larger corporations compile monthly reports of business conditions for distribution within their own organizations. The idea usually is to summarize business conditions in general, compare these with the results of operations of the corporation itself, and then interpret the correlation of the two. Perhaps the highest development of studies of this nature is illustrated by the monthly *Business Conditions Report* issued by the Statistical Department of the American Telephone and Telegraph Company for distribution within the Bell Telephone System. In this report, after a general statement of conditions, chapters are devoted to the stock market, money market, corporate financing, metals, transportation, crops, imports and exports, and kindred business subjects. This is followed by reports made by the associated telephone companies located in various parts of the United States, giving a review of the local trade conditions in their respective

territories. In the back of the report a series of charts are run which show graphically the progress of the Bell System as compared with various indices such as railroad earnings, pig-iron production, bank clearings, exports and imports, business failures, and new building, etc.

In the financing of a business most executives find a summary chart of revenues, expenses, and net revenue, such as is illustrated in Chart II, to be very useful in obtaining a bird's-eye view of the situation. From the study of this chart it is evident that the business is greatly affected by seasonal fluctuations. Revenues drop off in the summer much faster than expenses can be reduced, consequently, the net falls even more. In August expenses increase before revenues grow, probably because of large advertising expenditures, overhauling of plant, etc., in preparation for the fall trade.

IV

In the handling of the personnel of a corporation, statistics are usually compiled from the employees' service records to furnish information as to occupation, age, salary, and term of service. Such data are useful in the selecting, training, and promoting of employees and are often of value for other purposes. At the time this country entered the war, one corporation, by means of an elaborate census of employees, previously taken, was able to calculate, while Congress was deliberating on the selective service law, how many of its male employees would be included in the draft. Consequently the management was able to prepare promptly for replacing the men called upon for military service.

If a corporation has a relief and pension department, statistics are usually kept to show the cost of the mainte-

nance and the number of accidents and cases of sickness which occur among the personnel. The nature, cause, and length of the disability due to accident or sickness is also tabulated. After a mass of this information has been accumulated studies can be made to determine what industrial diseases, if any, or unusual occupational hazards are involved in the practical operation of the factory or plant.

V

Perhaps one of the most recent developments of corporate activity in which statistics play a major rôle is in the building up of research departments. Many banks and bondhouses desire to make intensive studies, both from an economic as well as a financial standpoint, of the particular corporations whose securities they propose to underwrite. Their motive is to determine not only the soundness of the corporation's financial policies but also the value to the public of that corporation's product, the opinion of consumers as to quality and service, and the degree of efficiency at which the factories of the corporation are operated. Likewise, many advertising agencies have started statistical research departments to study the market possibilities of their prospective clients. These organizations are far-seeing and believe the foundation of their own success lies in advertising successful and worthwhile enterprises only. They therefore study a corporation to determine the stability of its management and the quality of its output. Similarly auto truck and tire manufacturers and makers of special engineering equipment employ research experts to study the problems of prospective customers. These specialists then prescribe the particular type or style of their various products

best adapted to the existing operating conditions. Here again statistics are used.

In the preparation of statistics five cardinal points should be kept in mind. These are:

1. What statistics to get.
2. The method of securing and the sources of statistics.
3. To whom the statistics are to be presented.
4. The form in which the statistics should be assembled.
5. Getting action on them.

This will be explained briefly as follows:

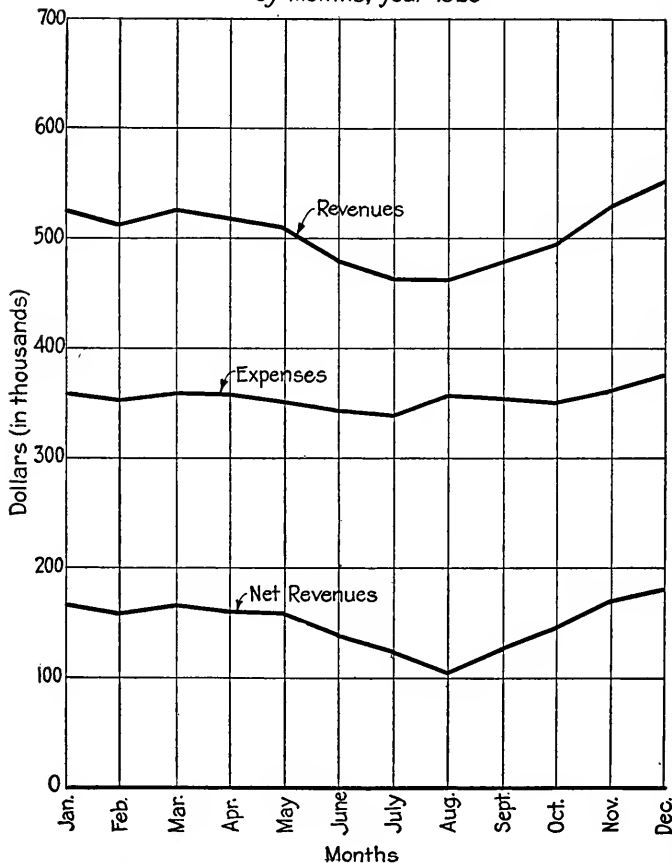
1. The statistician's job in a business organization is to determine what data are necessary for the use of executives, to anticipate as much as possible their requests for information and, on the other hand, to avoid collecting data which will be of little or no use. For example, some large companies, might wish for detailed weekly reports of the sales of each article in each county of the field, while for a smaller concern a monthly report of the sales of the more important articles by states would be sufficient.

VI

To illustrate how requests for information may be anticipated assume that the policy of an electric motor manufacturing company is to improve its models from year to year and make them more adaptable to the customers' needs. The statistician might collect data by means of a questionnaire which would be sent out six months after the sale of the motor. The purchaser would be asked to report the nature of the service under which the motor operated, the hours of service per day, the per cent and duration of overload, what had been the nature and cost of repairs, if any, and what failures to meet existing conditions had

A MANUFACTURING COMPANY

Monthly revenues, expenses and net revenues
by months, year 1920



been observed. These reports would be studied, statements summarizing certain items prepared, and the information would be turned over to the experimental division of the production department as an aid in the development of more perfect models.

Oftentimes statistics of certain kinds may be very useful for a time and later of less use because of changed conditions. An executive may wish for weekly labor reports during a period of reorganization in order to study the change in the size and character of the personnel. Later on, however, after the organization is well established a report of this kind rendered monthly or even quarterly may be sufficient.

2. In collecting his data a statistician must be careful of his sources of information. When possible and when the cost is not prohibitive, data should be taken from original sources, unless the statistician has confidence in a report already issued and knows how it was compiled. Care must be taken to determine the accuracy and the exact meaning of the data at hand. Sometimes data are compiled from sales reports of production records already existing and here the problem is mainly to investigate the reliability of the data and rearranging them in suitable form. In other cases it is necessary to compile the data direct from its source. For example, in making time studies to determine labor costs on jobs in a factory it might be possible to get the data from the time records of each employee. In most cases, however, the time records would show only the total hours worked but no data as to the time consumed on each job or on each operation on a job. Hence, in a case of this sort it would be necessary to make some sort of time study within the shops.

3. After the data have been collected the most important part of the work re-

mains to be done; that of conveying the information to the executives. To do this the statistician must remember for whom he is preparing the information or the particular use to be made of it. A production manager is interested primarily in the costs of production. Only to the extent that they would affect his costs or necessitate changes in processes or the like would he be interested in sales statistics. Hence, only in exceptional cases would he need sales figures. On the other hand, a sales executive wants to know all about his sales, the proportion coming from each salesman or territory, the ratio of selling expenses to sales, and the ratio of sales to expected quotas. But he would not care to know so much about the detailed cost of the product except where it might affect selling prices.

4. This depends largely on the purpose the figures are to serve. In the interests of economy and as an aid to making proper comparisons, a statistician should endeavor to standardize his reports. Always, however, special statements prepared to set forth certain facts will require a form of report to suit the figures. Data should be assembled into the proper units. These units can then be combined in any manner required to give the proper totals. To illustrate, the sales manager may want to know the total sales of a certain article and the sales of this article by states, zones, or salesmen. If an analysis of the sales is first made merely to get the grand total, the work will have to be done over to answer the second request. On the other hand, if the data are first compiled of sales by salesmen, these figures can easily be built up into sales by zones, states, or other geographic divisions as required, without making a second analysis of the basic data.

5. If the first four points have been carefully worked out this last step will

be easy. For, if the purpose of the figures has been kept in mind, if the correct plans of collecting the figures from the proper sources have been followed, if the needs of the persons for whom the figures are to be presented have been kept in mind, and if the figures have been assembled in a manner that will be clearly understood by the person to whom they are to be presented, then the action necessary is usually so plainly indicated that no argument is needed. The facts will speak for themselves.

The executive of today, no matter what line of business he is in or what his particular position is, should have, in the writer's opinion, a general knowledge of the fundamental principles of four subjects in addition to his specialized training. These subjects are economics, the science underlying all business; law; engineering; accounting, and statistics. The necessity of a knowledge of the first three is fairly well established. It is only rather recently, however, that business men in general have begun to recognize the value and necessity of accounting records and reports. The science of statistics is still a new subject to all but the most progressive executives.

VII

Graphics can be said to represent the last word in statistics, for usually, after a table of figures has been set up, the next thing is to "illustrate" it by means of a chart. An executive might well devote considerable time to a study of the construction of graphics because they constitute a most potent

form of expression and he will find them an extremely useful tool.

A well-constructed graphic on one page will usually tell an executive much more at a glance, than he can learn by wading through four or five pages of reading matter or statistics. The ideal way of preparing reports seems to be first to present a graphic which will give the executive the whole story in summary form. This should then be supported with auxiliary graphics and with statistics, comments and interpretations which he can peruse at his leisure if he desires.

It is not too much to hope that a time will come when many executives will emulate the practice of a certain Wall Street broker who used the top floor of his home as a chart room. Here, on large boards, various financial data, such as the fluctuations of stock and bond prices of various corporations, output figures and other indices of market conditions, were plotted daily. This man, seated in a comfortable chair, then used to spend an hour each day in this room while his secretary exhibited the various charts before him. This broker felt that here was the ideal manner of acquiring the information upon which he based his operations in the stock market.

A study of the construction of graphics is particularly useful to a business man. For through a knowledge of the rules of chart-making he can accustom himself to read graphics as readily as he reads a newspaper. And, as mentioned above, graphics are the clearest, quickest, and most condensed method of conveying most information wanted by the business executive.

PRACTICAL ORGANIZATION OF INDUSTRY

BY CLINTON E. WOODS*

PART I—THEORY OF ORGANIZATION

A WRITER on business analysis and control once said, "The secret of every great executive's success is embodied in three words, namely, his ability to organize, deputize, and supervise."

The late Andrew Carnegie is quoted as saying that if he lost all his money it would cause him no concern, provided he could keep his organization. If one were to study the lives of America's great captains of industry and merchant princes in search of a reason for their success one would find that this reason could be summarized "in their ability to co-ordinate the various branches of work in their respective business, select the right men for the job, obtain their co-operation, and then supervise them."

Briefly enumerated, the aim of every organization is:

1. To unite systematically a body of individuals for the purpose of working toward some common end.

2. To unite the divisions and departments of a business into reciprocal and concrete relations and duties.

3. To bring individuals into systematic co-operation as a whole.

The first two aims cover a general field; the third is the real "bulls-eye" which every organizer must try to hit. This word "co-operation" is the most important word in the industrial world, and the biggest "operation" to be tackled in every factory because it takes the combined effort of all employees to put the "co" into it. The office, the

engineering department, the manufacturing departments are each and all dependent and interdependent on one another. Invested capital can never attain its full measure of efficiency without their ultimate co-ordination and co-operation any more than the employees of these departments can obtain their full measure of opportunity and pay-roll value without co-operation. It is only when managements and men recognize this that real efficiency can be obtained.

Briefly, co-operation means:

1. A man's confidence in his boss, in his fellow-workers, and in himself.

2. A cheerful execution of all orders issued.

3. A loyal willingness to assume full responsibility for designated duties without "passing the buck."

4. A remembrance of the fact that the company's interests permeate every department, every activity of the business, and that there can be no real co-operation, unless morally every employee's interest does likewise.

II

The fact should not be forgotten that the man who takes a delight in seeing the other fellow "fall down," or who "makes good" himself at the expense of somebody else, sooner or later "gets his." He's been throwing boomerangs pointed at both ends, and when they return they put him out of business. This statement applies to both managers and men.

The three things which give steady advancing employment and fatter pay envelopes are loyalty, obedience,

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and helpfulness—in short, co-operation. If any man doesn't believe it, just let him work along this line for a while. Instead of boomerangs he'll get back bouquets.

Thus to organize, to deputize, and to supervise, solely to obtain and maintain co-operation among individuals and departments becomes the real work of every manager. All that is under his direction can be but a part of some general scheme purposed to a definite end. Therefore, how necessary, how essential, that he have co-operation on the part of every superintendent, every department, and every foreman to whom he has deputized work and responsibility!

In the office, plans are conceived and formulated; in the factory these plans are carried out; then in the office, results are measured up and judgments passed. There is usually more difficulty in obtaining co-operation between the office and the factory than between the departments in the office and the departments in the factory, due perhaps to the difference in the character of the labor required for the work to be done. If, however, the hands and feet of things are in the office, the great digestive center of activity is in the factory, and unless proper organization and co-ordination exist between the two, the factory will certainly suffer from cramp and stomachache in its endeavor to get away with all that is thrust into it, if the men in charge are not in agreement regarding the work to be done.

Men must be taught that when they have a grievance and things go wrong, they should not "knock" but should go to their boss for help. If he won't give it, the wrong man is on the job, because this great fundamental fact should not be forgotten: *Every man's boss is responsible for the work done by the man.* If the boss is not interested in his men's

work, how long is he going to last? Figure it out. The boss is there to help the men just as much as the men are there to help the boss, and this mutual help can only be obtained by co-operation.

Boosting and cheering are great stimuli, but the fellow who actually puts his shoulder to the wheel and grunts is rendering a real service; and when two fellows put their shoulders to the same wheel and grunt together, nothing on earth can keep it from turning. Multiply this by all the department heads in a factory, and a potential energy is generated which will batter down the walls of competition from New York to China. A factory working under good co-operative organization can produce goods at a cost far below that of any competitor not as well organized; and low costs are what count for profit.

What every company must have first of all from an employee is a willingness to share the other fellow's troubles, to have that interlocking interest in the company's activities which goes to make a complete whole out of many parts and responsibilities. In short, there must be an application of the Golden Rule, for which co-operation is simply another meaning.

III

Any business not properly organized or supervised can no more endure than can a house without a foundation or a nation without a government. Organization is the skeleton upon which are built all methods for discipline, purchase control, production control, selling, accounting, administration, etc., and without a general knowledge of how to proceed to obtain the necessary organization for a manufacturing business, no student of industrial engineering can hope for anything but limited

success. For organization and co-operation mean "men and their jobs," and result only from a proper classification of the various kinds of experience required in a business in order that it may function efficiently; and after all is said and done, efficiency simply means authority and responsibility so well defined that there can be no lapsing over, no "side-stepping" nor "buck-passing" in handling the many details of an industry.

Ordinarily the organizing of a business is looked upon as meaning simply putting certain persons in command of certain departments or divisions of that business. Back of all this, however, there is this principle: that widely different kinds of experience on the part of labor and the necessary authorities to control it are required for the different kinds of activities incident to any business. To illustrate this, a blacksmith would not be hired to take charge of accounting work, neither would an accountant be hired to take charge of a drafting-room, nor would a chief draftsman be hired to take charge of a foundry. Nearly every line of manufacture has in it a large variety of classified trades, each embracing a separate and different experience running all the way from the administrative, accounting, and selling forces in the office to the engineering and processing departments in the factory. The successful development of an organization requires that it be laid out in accordance with the demands for the product which is to be manufactured and sold and in accordance with the experience based upon its manufacture and sale.

To make an analysis of what the departmental divisions of a business should be, it is necessary to study first the product to be made; then the engineering work and processing work required for this product; then the plant service needed in connection with

the factory to support the processing departments; and, finally, the administrative and selling effort required to govern them all. When all these details are clearly defined, not only will the class and character of labor to be employed be indicated, but also the necessary authorities to control it.

Such an analysis should be made without regard to any existing personnel connected with the plant, for the designing of an organization is not different from the designing of a machine. It should be taken for granted that the organization will be properly manned after it has been designed.

IV

A close analysis of any organization will show that it is exactly like a machine, inasmuch as it is made up of assemblies and subassemblies. In other words, there are many units of work assembled in a general scheme. For instance, all purchasing and stores work is a unit, as it takes a kindred line of experience and knowledge of its various branches to control it. The same applies to accounting work, selling, etc. So the first thing to be done in forecasting an organization is to determine what these prime divisions or units shall be. This can be arrived at very quickly if the student will stop to consider the nature of the work to be done by these units and the experience required to do the work for the various divisions of any particular business. An analysis for organization purposes can be made for almost any manufacturing business. If there are variables, they will be due to some highly specialized element in the business that must have unusual consideration. A general classification¹ for such an analysis is as follows:

¹ Originally given in C. E. Woods' "Unified Accounting Methods."

1. Administrative Work
 1. Finance
 2. Investments
 3. Insurance
 - Etc.
2. Selling Work
 1. Advertising
 2. Selling
 3. Collections
 - Etc.
3. General Accounting Work
 1. General Bookkeeping
 2. Billing
 3. Balance Sheets, Profit and Loss Statements
 - Etc.
5. General Office Work
 1. Correspondence and Typewriting
 2. Mailing and Filing
 3. General Supervision
 - Etc.

The above analysis relates more particularly to the commercial end of a business. In the manufacturing end, under a factory or works manager there would be:

6. Purchasing Work
 1. Buying
 2. Receiving
 3. General Stores
 - Etc.
7. Engineering Work
 1. Designing of Product
 2. Designing of Plant Preparation
 3. Planning Work
8. Plant Service Work
 1. Power and Power Appliances
 2. Millwrights and Installation Work
 3. Water, Steam, Electric and General Plant Service
 - Etc.
9. Processing Work
 1. Tool Making
 2. Processing Product
 3. Equipment Maintenance
4. Factory Accounting Work
 1. Timekeeping and Pay-roll
 2. Costs and Statistics relating thereto
 3. Inventories
 - Etc.

10. Shipping Work
 1. Shipping
 2. Warehousing
 3. Transportation
 - Etc.

Any scheme for organization must have as a first step four definite and fundamental considerations:

1. Its relationship to the product manufactured.
2. Its relationship to the various kinds of authorities that are required to control the activities of the business.
3. Its relationship to the accounting methods that must be installed in order to control the personnel and the production.
4. Its relationship to the personnel which must be controlled in its expenditure for overheads, etc.

True organization means the deputizing of specific work to specific individuals and then supervising these by accounting and recording methods in such a way that definite responsibility on the part of the personnel of the organization may be obtained and maintained.

V

Systems are of no more value in any organization than so much paper if someone cannot be held definitely responsible for their operation; neither are accounting methods; neither is any method of production control or stores-keeping. In making a study for the purpose of laying out an organization, there are many things to be taken under advisement, but the starting point always consists of the four considerations enumerated above.

From another point of view, all of the foregoing simply means that an organization must be laid out in definite form before any methods for controlling it or its activities can be applied, because in no other way can responsibility be co-ordinated or co-operation arrived at for controlling the business

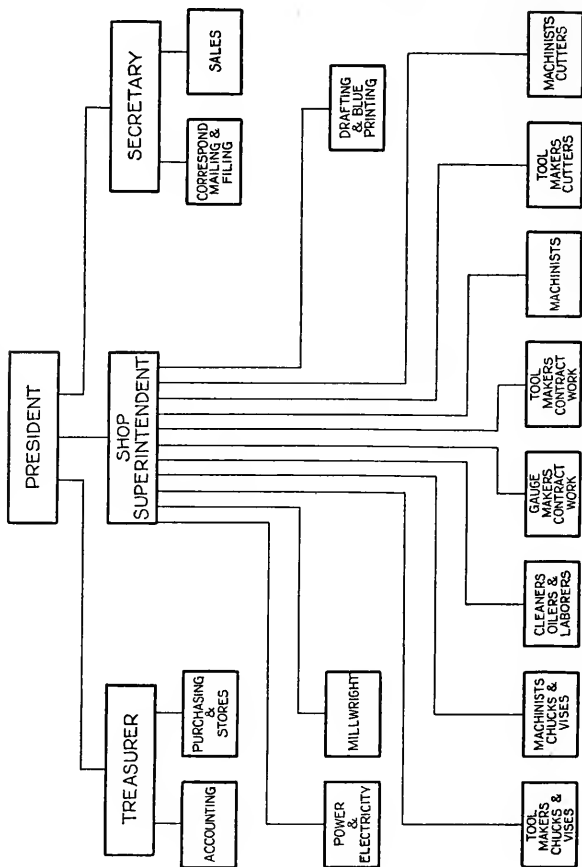
MILITARY ORGANIZATION*Line & Staff.*

CHART II

either as a whole or by units or departments.

No matter how experienced an engineer or an accountant may be, he is almost helpless in the absence of any definite plan of organization. His work can only reflect a series of conditions that are not under control. He can in no way predetermine results with any expectation of certainty and can at best introduce efficiency only in spots, that is, in a fragmentary way.

It is said that any rule which will not work both ways is a poor rule. Therefore, an engineer or a manager may lay out and design a perfectly ideal organization and even man it with a perfect combination of experience, yet, if the methods for Production Control and Accounting Records are not in agreement with the organization and the work that is to be deputized to it, the organization will quickly pass from under control and the management will suffer from a combination of chaos and inefficiency. Put in another way, all methods, systems, and records must be co-ordinated with the organization, or co-operation on the part of its personnel is impossible, for it must always be remembered that no organization, no methods, or systems will ever operate in and by themselves; they must be controlled and directed. To be controlled they must be co-ordinated; to be efficient they must be co-operative.

The work of an industrial engineer, in a broad sense, is of little value in the absence of a well-defined organization, and likewise, an organization is practically inoperative unless supported by reasonably efficient production engineering and cost work. Consequently, the importance of understanding organization as a first step is apparent.

Organization in reality has two separate and distinct forms: one, corporate organization, having to do with the legal organization of a corporation; the

other, plant organization, having to do with the personnel and their responsibilities in the operation of a manufacturing business.

Corporate organization does not enter into our consideration to any great extent other than to classify its necessary personnel in connection with the plant organization which must, of course, include president, vice-president, secretary, treasurer, and such other officers as may be necessary for both forms acting in direct control of the business as a whole.

Industrial or Plant organization is governed by one of three kinds of organizations known by types as Military, Functional, or Departmental, and sometimes by a combination of the latter two. A brief description of each of these types follows:

VI

The military type of organization is in reality a one-man-control scheme. This one man has full and complete authority over everything, with a corresponding responsibility. It represents the old type of management whereby all detail was made to pass over the manager's desk and all instructions emanated from him or over his O. K. Consequently he had of necessity to be in a large measure a rule-of-thumb man, his one and only interest in the handling of labor being that of muscular activity. "Saw Wood" was his motto. As long as his men were actively engaged in actual labor of some kind he was content, as this meant to him visible production, a pile that could be seen.

Any head work done on the part of the labor in his employ, either as clerk or engineer, was considered by him a waste of time. He was simply a driver of men, not a leader. He watched everything and everybody in detail in

his own way, according to a system or method based only on his personal experience, and did not care a "hoot" about efficiency as the word is now understood. This applied alike to superintendents and foremen of departments. They hired and fired their own men, trained their own men, planned their own work, looked after all the repairs in their divisions or departments, and helped themselves to such materials and tools as in their judgment were necessary for the work they had to do. Each department in a factory was independent of every other department and it had to stand on its own feet for everything it did or required.

Any small shop making a specialty of some kind and having a very limited variety in its output can do fairly well under this kind of management, and it is still in operation in some small factories; but it fails sadly in large plants. Managers have come to realize that foremen of the average class cannot direct with any degree of efficiency more than from forty to fifty men at best; and that in large plants operated under present methods of intensified production made on the basis of a definite schedule, a foreman's entire time is required to keep his men busy on production operations. In laying out an organization and allotting the work of supervision, consideration must be given to the fact that the more automatic machinery is in its processing work, the larger the number of men that can be directed by any one foreman; the more manual the work is in its character, the less the number of men that can be directed under any one authority.

As the size of factories increased, the military type of organization broke down, first, from a lack of co-ordination in the work done; secondly and more especially, from a lack of co-operation

between the various division and department heads and function specialists. Repairs, upkeep, maintenance planning, move work, etc., became subject to many neglects from sheer lack of definite responsibility in connection with such work. "Work in Process" inventories became unmanageable, and anything like a uniform flow of pieces to assemblies and subassemblies was hard to maintain. Consequently "buck-passing" became a habit, and the results of it showed up as wide variables in inventory values and volume of output obtained.

Many schemes were tried to overcome these undesirable results and buck-passing propensities, such as the installation of piecework and independent inspection. In many instances labor control improved somewhat under the new system which failed, however, to produce any improvement in "Work in Process" quantities whereby uniform assembly could be maintained. It increased the fault of having large quantities of some pieces on hand to assemble and none of others, due to the fact that certain classes of work were put on a piece basis and others were left on day's work. Its main defect was the strong tendency to encourage labor independence, for under it the laboring class came to consider that it was in business for itself and claimed many concessions for waiting time, tool-set-up time, etc., which were hard to adjust, and so functional organization was brought into existence.

VII

Functional organization is based largely on what is known as the "Taylor System." Frederick W. Taylor, its originator, developed this system to such a degree that it became popularized under the name of "Scientific Management," a much discussed sub-

ject for the reason that it was a "howling" success in some instances and a dismal failure in others. As a whole, however, perhaps nothing has ever been introduced into the industrial world that has done so much good as "Scientific Management." Its principles were revolutionary in their character, causing manufacturers to "sit up and take notice," and then to make inquiry into their own methods for the purpose of determining whether or not they were as crazy or foolish as Mr. Taylor would have them believe. Through these investigations many a factory became well shaken up, and as a result functional work was introduced in a fragmentary way to a much larger extent than has been generally supposed, but in most instances no credit for improved methods was ever given to the principles or functional value of scientific management.

Functional organization is based upon the theory that all men should be turned into specialists and that each specialist should have control of such work in the plant as comes within the classification of his specialty. By this method all workmen in a factory are subject to several authorities, such as a gang boss, speed boss, repair man, inspector, timekeeper, and an instruction or planning-room clerk. In other words, specialists are provided to look after these things instead of their being left to a foreman. The purpose of this plan is to intensify production to such a degree that labor can earn a continually increasing rate proportionate to intensification. In some instances the scheme has worked out in exactly this way, in other instances it has not proved to be practicable. Its greatest value is in such shops as manufacture in limited variety and in large volume, as this affords the necessary repetition work required to make such methods workable.

This type of organization is supposed to develop definite responsibility, but in many instances it has failed to do so for the simple reason that the workmen are often subject to the authority of seven or eight bosses, some of whom make out instructions, while others say how these instructions shall be executed, and these bosses are not always in agreement. When things go wrong it is difficult to place the blame, as there is great opportunity and often necessity for executing the work in an entirely different way from that planned. Without a manager or a reference committee to adjust such differences both the work and the men's feelings get sadly mixed up.

To start a job, the workman usually comes in contact with several authorities, and as a result his own personal initiative is pretty much squelched. Both men and foreman lose not only initiative but interest as well. Making a specialist of a workman is supposed to intensify his interest and ability, but it fails to do so if there is conflict between the various authorities over him.

Boiled down, functional organization is not a success unless the specialized functions are properly departmentalized and co-ordinated, and the lack of such departmentalization and co-ordination seems to have been the real cause of its many failures. Functional work as such is a necessity, but it cannot always be made operative on independent lines. Conflict of authority is demoralizing, and it is very difficult for a foreman to work under several masters and at the same time assume responsibility for anything. Neither will a man in charge of a specialized function assume responsibility for any work outside his own. Therefore, when there is disagreement and neglect occurs, it is almost impossible to find out *who is* responsible. To remedy this defect, functional work,

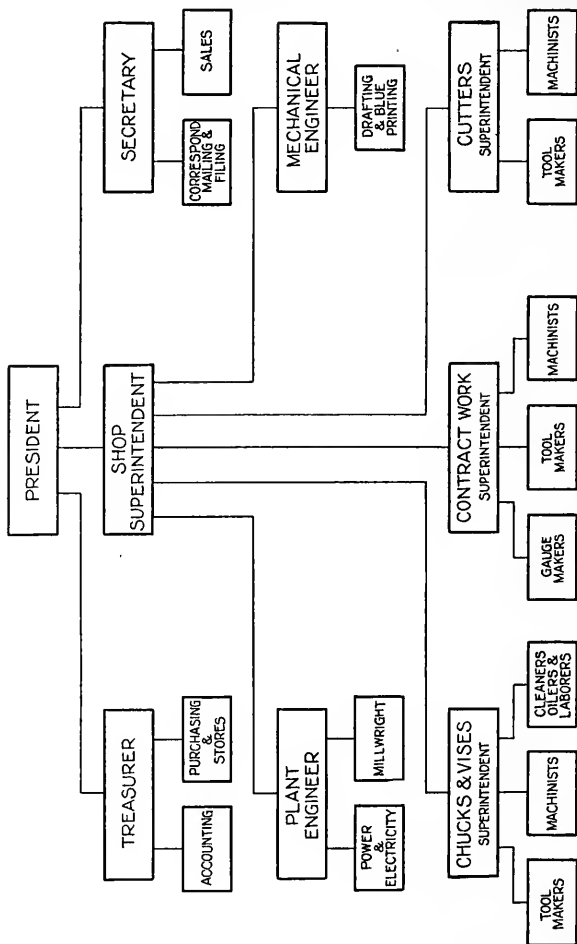
DEPARTMENTAL ORGANIZATION

CHART III

like all other experiences, must be definitely departmentalized into the organization as a whole.

VIII

Departmental organization, as the term implies, is the division of a business into several departments according to the various experiences required for the different kinds of work to be done. Therefore, under this type of organization functional work is subject to departmentalization as much as any other activity and should be co-ordinated just as much as any other experience. The principal reason for its failure is that it has not always been workable as an independent activity, being too much in the nature of a free lance. It has lacked all definite responsibility and has not been sufficiently subject to administrative control. Co-ordinating its departments corrects these defects.

Departmental organization, however, is not exempt from pitfalls, as only too often it is based on operations or equipment instead of on definite experience for its formation and division into departments. In such cases authorities are not well established. They lack definition from an experience point of view. To call one section of a factory the machine room and another the foundry is the grossest kind of terminology, as there are many kinds of work done in both that call for widely varied experiences not possessed by any one man. The same criticism would apply to an office embracing administrative, advertising, selling, accounting work, etc., each of which should be a separate department.

Again, an analysis of many organizations will reveal the fact that in certain sections they simply represent account number distributions rather than divisions of authority according to the

experience required. Such an organization results in a wide-open opportunity for "side-stepping" and gives little or no opportunity for fixing responsibility, as it is impossible to hold anyone actually responsible for variations in expense and variations in inventory values and quantities when the name of a department reflects an expenditure rather than an experience.

The purpose of any factory accounting system is primarily to control productive and non-productive expenditures and the results obtained therefrom, and, secondarily, to control the personnel, either individually or collectively, as applied to the entire organization.

Therefore, attention is again called to the fact that the necessary organization for a plant must be worked out and started before any practical system for production control or accounting can be devised. An organization should never be fitted into an accounting system, but accounting methods must be devised to fit the organization required for any particular business. This is the only possible way that real control and efficiency can be obtained. All the departmentalizing required to operate a factory, including functional work, engineering work, planning work, etc., can be done in a perfectly clean-cut way and in such manner that the engineering or planning departments can issue specifications and instructions to be executed by the superintendents and foremen with definite responsibility and without conflict; provided it is based upon a correct classification of the activities and experience required for the work and upon a clear understanding that each department means a definite section subject to the direction of a definite authority. By this method of procedure departmental organization divides the entire work of a factory into a number of separate and

distinct departments, puts each department under the control of one man who has charge of the execution of all work done by or required from that department, and so co-ordinates the work of all as to give definite responsibility and corresponding administrative control.

Drawings are furnished by the engineering department, and the tools are built and the product manufactured by the factory department in accordance with the same. Plans and instructions are issued by the planning department in accordance with some actual schedule of requirements. As these schedules are based on standard times and the equipment available for doing the work in any particular department, it can be left entirely to the foremen of the departments to see that these plans and instructions are carried out without conflict or disagreement.

The service required for any particular department in the shape of millwright work, move work, etc., is executed by the service department or works engineer upon a requisition from the foreman, thus making him an actual boss and not a figurehead in his department. As a matter of discipline, no matter in what department a workman may belong, he should be subject to the orders of the foreman of the department in which he may happen to be temporarily, as in no other way can soldiering and loitering be eliminated and universal discipline maintained.

In large plants making a large volume of output, some departments will have in them from two to four hundred men, in which case there is a general foreman supported by a sufficient number of assistant foremen to govern the department. Each assistant foreman, however, should have charge of some definite class of work. In this way there is a well-defined line of authority for every activity and operation, and

the business as a whole can be efficiently managed.

It should be borne in mind that an organization is for the purpose of management as well as for achievement either as a general departmentalization or as pertaining to an individual department; that it is in no sense created for the purpose of generating systems, or for the purpose of making bosses, and that its definite object is production, the aim of any investment in a factory being to produce something at a profit, and nothing else. Therefore, all methods of cost accounting and inventory and production control must be designed simply as a means to this end.

Students of organization must also remember that organization must be co-ordinated in such a way that there will be no conflict of authority; that it must be controlled by such systems of engineering, planning, and accounting as will enable the manager to keep in constant touch with all the activities under his charge, and that the most important work in the whole organization is that class of industrial engineering work that plans for the future and prevents inefficiency, in other words, predetermines results by an actual knowledge of what should be done with the labor and equipment available.

IX

There is, of course, a wide difference in the attitude of certain managers concerning these things. Unfortunately, some managers become so obsessed with the idea of system that they are always living in the past; spending most of their time on things that have gone by. Such men are historians, not managers. The efficient manager is the one who is always looking ahead, whose whole procedure is based on methods that will give him a predeter-

mination of results based on maximum output with minimum labor and investment in inventory and equipment. History and specifications are to him simply means of comparison, of checking up his schedule for accomplishment. He sees accounting systems in their true light, considering them only as instruments for measuring up results.

This new type of manager is one who is more of an accountant, more of an engineer, more of an executive, than the one who has risen to the position through his ability to sell, to advertise, or to invent, because his whole purpose and his whole specialty as a manager are confined to production and all its various problems. His real job as an executive is to find out what is to be done and then get the right labor and equipment combination to do it, i.e., to organize, deputize, and supervise. Perhaps the greatest ultimate value of Industrial Engineering as a profession will be that its teachings and principles will qualify men to become executives of this type.

In order to illustrate in a summary way the foregoing, Chart I, called a "trade and activities chart," has been made as a study in "experience" grouping. This chart is a revision of a similar one designed by the author twelve years ago, and has been widely copied in various ways. This revised chart, however, is much more complete than the original one and well illustrates the basis for departmental division.

The first experience represented on this chart is one in connection with general stores, showing that all material comes under one control, that of general storekeeper. Bar iron goes to the forge shop division, and the work in the forge shop is divided into four different departments, requiring four different experiences to operate it. Pig iron, which is processed in an entirely different way from bar iron, is drawn

into the foundry division and is also represented by four departments, requiring a corresponding difference in experience. It should be noticed that all forgings go into forging stores and all castings into casting stores. This means that both the forge shop and the foundry are to be run on independent schedules, and that in order to put these items of manufacture into stores independent costs must be obtained on both forgings and castings, and that at these costs these items will be drawn into the machine shop for the processing required to make them into whatever they may have been designed for. The machine shop division is also represented as being divided into four departments which terminate in an assembly department, the motors from the assembly department then passing into motor stores.

Referring again to the general stores division, it can be seen that an entirely different experience from the foregoing is required, inasmuch as lumber is drawn into a woodworking division which is represented as being divided into four separate and distinct departments, the work from which goes direct to a final assembly department, at which point motors are drawn from motor stores in order to make the final assembly.

From final assembly there are three separate departments through which the work must pass before going into finished stores, from which point the product is shipped.

Other experiences on this chart are represented in engineering work, drafting work, etc. Drawings are sent to the tool-making department for the making of tools, the tools are sent direct to the machine shops, and other drawings as required for items of regular manufacture are sent direct to the machine shop. In addition there is an accounting division divided into two

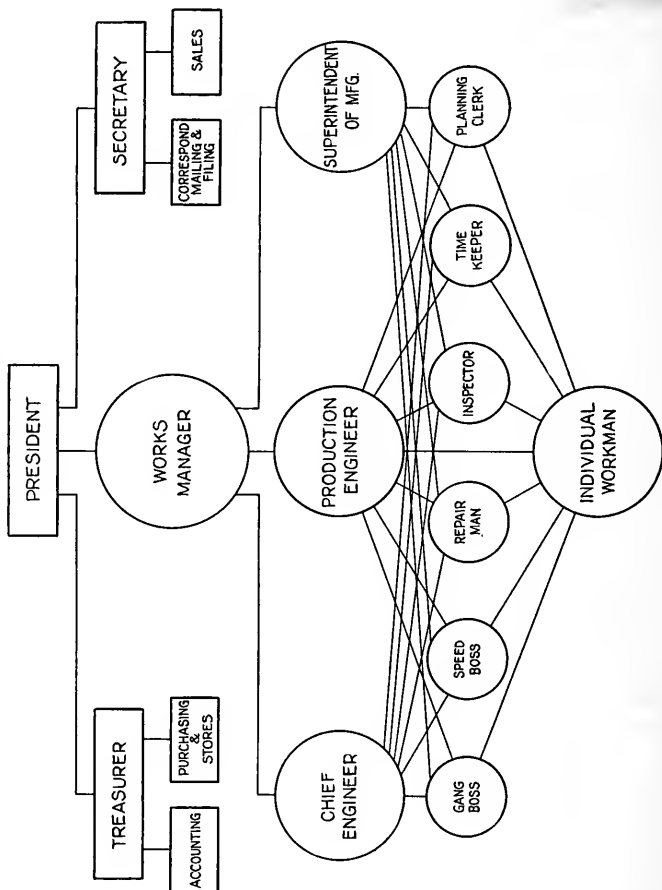
FUNCTIONAL ORGANIZATION

CHART IV

departments; one covering general accounting and the other covering costs, the latter being connected directly with the machine shop.

In studying this chart it must be borne in mind that it is not intended to be complete, but is designed simply to illustrate the general theories and principles of organization previously described. From such a study as this it is easy to arrive at a definite analysis of what is required for any particular business in the form of divisions and departments, as these illustrate not only the experiences and authorities required to control a business but also the physical requirements for a plant layout.

To properly design a plant an analysis of this kind should be made for the purpose of arriving at the necessary arrangement of departments in order to minimize the handling and storing of materials and economically control the work. The chart illustrates not only the kinds and character of departments that will be required, but also the sequence of departmental relationship that should be adhered to in laying out or organizing a factory in order to keep the product traveling in one direction. The actual groupings represented on a chart of this character clearly show the arrangement required for new buildings or the rearrangement of old ones in order to obtain economies in manufacture by a reduction in material handling and time lost in transportation. Such an arrangement also effects concentration of superintendence and supervision. In most instances such a chart will be made for an already existing plant rather than a new one; and nine times out of ten this will open up wonderful opportunities for obtaining efficiency by a rearrangement of departments, both physically and geographically. It is well worth the study of any concern if for no other purpose

than to ascertain where weaknesses exist and to what defects certain inefficiencies are due.

It can be seen that industrial organization does not confine itself to the personnel required for a control of the activities in a business, but that its physical organization is of equal importance, including as it does the grouping of buildings and departments, the handling of materials and appliances, the distribution of power, the various kinds of transportation, both external and internal, for moving materials, etc., and the necessary means for internal communication to handle with dispatch all orders and requests for information which arise from hour to hour and from day to day in the operation of a factory.

X

In order to illustrate the theory of the three different types of organization heretofore described, a small chart of each type is hereby presented which will serve to illustrate the main differences between the types of organization, and fix in the mind the different authorities and relationships in each type.

Chart II represents the organization of a small machine shop making a miscellaneous lot of tools, etc., in which the superintendent of the shop takes charge of each individual foreman, under the military type of organization, inasmuch as he assumes direct responsibility to the president for any and all shop activities.

This type of organization is common to nearly all small shops, and, as before stated, in a small shop is quite sufficient to control a limited number of men; but its efficiency depends altogether on the personal make-up of the foremen and their loyalty in supporting the superintendent. It lacks departmentalization in a clean-cut way, inasmuch

as it is not grouped into different activities and the superintendent is not in any way supported by a staff of technical men, his entire responsibility for everything that is done resting upon his shoulders.

Chart III shows a departmentalization by grouping certain activities under definite authorities and is practically the same as Chart No. II, except for the fact that the superintendent comes into direct contact with only five men. These five men constitute his technical and general supervisory staff. Instead of trying to run all the detail himself, this chart shows that the office of shop superintendent becomes an executive position, and that as an executive he deputizes his work to five division heads, namely, the plant engineer, the mechanical engineer, and the three superintendents, or, in a small factory, to three general foremen; and that under these five division heads as directed by the superintendent all the activities of the plant are controlled.

The result of such an organization is that through these subdivisions opportunities are offered for promotion throughout the entire organization. For instance, any one of the five division heads might be eligible to the position of shop superintendent, and any one of the department heads under any particular division might qualify for a division head. In this way the organization is tremendously strengthened and detail is looked after to a much finer degree than it is in the military type of organization where everything goes over one man's desk.

Chart IV illustrates the functional type of organization and has been gone into in considerable detail in order that the student may get a general understanding of just what it means. It is very different from either the military or departmental type, inas-

much as not only the individual workman receives orders from six different authorities, as illustrated on the chart, but each one of these six authorities is in turn subject to three other authorities. For instance, the inspector is subject to the control of the chief engineer, the production engineer, and the superintendent of manufacture, and so on for each one of the other five divisions, the head of each of which is supposed to be a specialist.

The advantages of this type of organization have been pointed out, but can be reiterated here by saying that in this type there is much more accuracy in the preparation of detail and in the transmission of orders than in any other type of organization; but in the execution of orders there is such a lapping over of authority, lack of discipline, and wide opportunity to escape responsibility that it has never worked out in an entirely satisfactory manner.

In conclusion, the practical, workable organization is in reality a combination of Charts III and IV, that is, it is a compounding of specialization and departmentalization into such a form that we have the same advantages in detail in departmental organization that we have in functional organization with a much cleaner-cut definition of authority and consequent ability to place responsibility for the execution of all detail in connection with a manufacturing business. The basis of this organization will be the subject of the next article, in which a very complete and detailed organization chart will be used as an example for showing actual practice in grouping all of the various experiences and activities required for the conduct of a plant whether it be large or small; all of which has a tremendous bearing on any and all methods for production and inventory control and for both cost and general accounting.

PIVOTAL POINTS IN PAYING EMPLOYEES

BY ORLINE D. FOSTER*

FROM the standpoint of simplicity of operation it would be most desirable to pay all employees in cash, that being the ultimate medium of exchange, but so many elements enter into the consideration of a pay system that simplicity cannot always be the unit of value.

Executives of large corporations have much to consider before they can definitely fix on the system of payment most desirable not only from the angle of their own business but also from that of their workers; recent thrift campaigns having amply proved how great a part psychology plays in building up stable habits of thrift and saving among the masses.

It would be difficult to estimate the potential value in terms of actual returns that would accrue to any employer if every member of his force could be persuaded to maintain a savings account. Sufficient to say that it would be the greatest known power to develop morale, eliminate petty bickerings and prevent strikes, for once having known the independence and advantages of an individual bank account even the indifferent worker gives serious consideration to any element that is likely to interfere with its development.

A reference to bonus and stock-sharing systems has no place in this article except to emphasize how far-reaching the financial side of a question may become in tying the interest of the worker to the corporation he represents. A steel strike was once broken because so large a majority of employees was financially interested

that they could not afford to run the risk of reduced returns on invested capital. This is only one instance of what may be accomplished by careful consideration of the employee's pay envelope from the inside. Given a proper background and due mental stimulation the system of payment may be made the foundation of substantial savings. It rests with the employer more than he realizes so to guide the saving instinct of his people by suggestive means that habits of thrift become as much a part of their daily routine as punching the time clock or any other automatic duty.

Setting aside the executives and heads of departments who are either American born or have been in this country for so long that they are thoroughly accustomed to its business habits, the majority of the workers in large plants are of foreign birth. Among these people one finds two major types; the thrifty peasant, or mechanic, who has been carefully trained to hoard his earnings and live with a minimum of expenditure, or the more volatile worker who needs either suggestion or restraint to bring forcibly to his or her mind the urgent need of conservation.

In choosing between two prospective employees to-day the employer is naturally inclined toward the man with the bank account because he presents to his mind a more forcible picture of purpose, stability, and the intention of making good. Given a reasonable opportunity he is going to augment his earnings rather than run any risk of decreasing them by inefficient work or a hiatus between positions, and he is

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going to consider the interests of his organization, if for no other reason, because their increased earnings will offer him better opportunities and a greater chance of adding to his own savings.

Many of the foreign element are systematic savers and with their arrival in the new world have come to utilize the bank as a safer repository than the foot of a hand-knitted stocking. The Emigrant Industrial Savings Bank, one of the oldest institutions of its kind in the country, reports that since its opening in 1850, deposits aggregating \$943,640,883.28 have been made. When to this is added the accrued interest, which amounted to \$123,230,352.89, we have a total of \$1,066,871,236.17 as the savings over a period of years of merely a portion of the working people located in and around New York City. During this period the withdrawals have amounted to a total sum of \$865,910,275.60. This bank now has 2,000,000 depositors, has as many as 10,000 transactions in one day, and during the January and July periods receives as much as a million dollars in deposits during a business day. Not all of its patrons are of foreign birth but a survey shows that 85 per cent of them live in tenements. Figures such as these must make the employer realize his measure of responsibility in adopting a system of payment that lends itself most easily toward encouraging this habit of saving.

Yet the employer cannot let this interest outweigh all other considerations. He has many angles from which he must view any fixed plan of administration. Primarily it becomes a question of business efficiency from an office standpoint, for increased overhead means decreased wages, decreased wages mean a reduction of both quantity and quality of output

and a lower type of employee. This brings in its train more errors, a higher percentage of accidents, a greater dissatisfaction among customers and an eventual lowering of the standards of the plant.

In addition, the employer has to take into consideration the environment of his plant, its accessibility to banks, the character of the merchants with whom his people transact their business, the isolation of his factory and the potential danger to workers from hold-ups on pay-days. He must also consider the mental capacity of his people and their comprehension of the methods involved in cashing a check. Racial characteristics for instance may nullify the value of the slip of paper and magnify the psychological impression made by the sight of actual coin. Paymasters in some plants where workers are paid in cash make a particular point of paying the smaller salaried workers in bills of small denomination, at some trouble to themselves, because to certain temperaments it means greater remuneration and constitutes an avoidance of the danger of handling large bills. All these things and many others enter into the consideration of how and why workers should be paid in a designated fashion.

With the introduction of the Volstead Act one great evil was eliminated. The cashing of pay-checks in saloons involved not only the danger of their expenditure before reaching home, but also their diminution because of the percentage deducted by the saloon-keeper in changing them into cash. Nor was this limited entirely to saloons. In early days certain unscrupulous merchants took advantage of the ignorance of employees and cashed the pay-checks largely to their own advantage. So serious did this evil become that in

some states a law was passed prohibiting the payment by check except on a bank where the money was on deposit to meet its payment. Another system of payment in vogue in earlier times was that of an order on certain merchandise stores where it was redeemable in commodities. This was so abused that a statute based on an old English law dating back to 1464 was passed to prohibit the custom. This statute was known as the Truck or Scrip Act.

Although the pay-by-check system has some serious disadvantages, particularly among workers of low mentality, who fail to understand how, when, or where it may be cashed; who have no bank accounts or established credits and are therefore at the mercy of unscrupulous persons; yet for the executive and higher grade of employee it is usually the most acceptable form of payment. Cash in the hand presents a ready temptation to spend, whereas if the worker is paid by check it becomes necessary to open up an account at the bank and the check is usually deposited, sufficient withdrawal being made to meet emergency needs. Thus, psychologically, cash offers a stimulus to spend, whereas, as every banker knows, when once deposited, money is not usually withdrawn without need.

From the standpoint of the employer payment by check has several advantages. By close checking errors may be avoided, it does away with the issuance of pay vouchers which must be cashed later, it eliminates the time wasted by the worker in signing the pay-roll, gives greater privacy to salaries paid, does away with the serious risk and expense necessary to protect large sums of money on pay-day, and gives protection to workers whose duties make necessary their retention in or their passing through

sparsely populated districts where there is danger of a hold-up. On the other hand the method involves extra clerical duties, which must be offset by careful and systematic labor-saving devices otherwise the clerical expense will make it a serious item of overhead.

Probably there is no more notable example of an occasion where the circumstances above quoted made it seem desirable to change from payment by cash to that of pay-draft than that of the New York Central Railroad. Unsettled conditions had made it dangerous for their towermen, switchmen, and engineers, most of them stationed in lonely places, to keep any amount of money about their persons. The arrival of the pay-car could be timed to a nicety by those who were interested and it was not an unusual occurrence for the men to either ask the paymaster to leave the money at the nearest station, or they would arrange to have their wives there to take it home. Neither way was free from danger, for it still involved the transportation of the money through an isolated district at a fixed and easily designated time.

Other objections were directly related to the pay-car itself. Easily recognizable throughout the country, the men on the car were always in danger, for the amounts carried were large. Guarding it involved considerable expense, delays were unavoidable, much time was lost paying off the men, and the cars were out of communication for long periods.

E. L. Rossiter, treasurer of the road, determined to try out the pay-draft and it was put into operation one division at a time. The district was divided into three major divisions with New York City, Albany, and Buffalo as the seats of administration. Assistant paymasters headed each

division and 1,500 key-points were established to act as pay-stations. These included all railroad stations and trainmasters' headquarters as well as other desirable points. The men receive their drafts at these places and station agents may cash drafts to the amount of the day's receipts. Arrangements have also been made with all banks along the line to cash the drafts. Where men are situated out of reach of banks the money is sent to them by messenger.

The actual physical method of handling such an aggregation of drafts is of genuine interest. Twelve days from the closing of the time-sheets the drafts are in the hands of the men. Pay-rolls are prepared from time-slips made up at divisional offices and sent to the Auditing Department at the Grand Central Terminal, New York, to be checked and verified. The drafts in sheets of five are filled in by typewriter with name, date, and key-point directly from the pay-rolls; are perforated with the amount of the draft; and are called back to the pay-rolls for the accuracy of names, initials, and amounts. They are then listed by divisions and an adding machine is used in proving them before they are sent out. Signing is done with five and ten pen machines, the drafts are cut apart, sorted, and the package for each key-point is sealed up with the sheet for that point. When the distributing agent gives out a draft, it is checked and the date of delivery is marked on the mailing sheet. When all have been delivered it is returned to the paymaster. Carbon copies of the sheets are retained at the divisional offices until the mailing sheet is returned.

A discussion of the reaction of the banks and merchants along the line shows distinct satisfaction with the new system. The banks feel that its

introduction has brought them many new accounts. Men who heretofore have spent practically all of their earnings have become interested in the dignity of the pass-book and are depositing a considerable proportion of their wages. Merchants, too, express considerable enthusiasm over the new plan. Far from objecting to cashing the drafts, they often carry excess cash on pay-days in order that they may meet them. This is particularly the case with chain stores. Credit is also more readily extended where the customer makes a practice of cashing the checks in the store.

Yet in talking with employers of labor in the various industries it is noteworthy that the general consensus of opinion seems to be in favor of cash. The General Manager of one of the largest department stores in New York City, employing from five to seven thousand men and women, expresses his opinion quite frankly in favor of cash payment. He says:

It would be an impossibility for us to pay by check and would be a great inconvenience to our people. I can see no object in paying weekly wages that are not of great volume in anything else but cash. I cannot see even the foundation for an argument.

This opinion is shared by one of the largest baking companies in New York City, whose force runs close to seven thousand. They too are paid weekly. To flood the banks in that district with seven thousand checks a week would be to put a serious strain on their already large volume of business, not to mention the office labor incident to making out the checks. The environs of the plant are carefully policed, all due precautions are taken in the transportation of the money, and cash seems the only logical form of payment for this type of organization.

Much the same conditions prevail in the hotel industry. For example at Hotel Pennsylvania, where over two thousand people are employed, all but the executives are paid by a voucher system which is virtually the same as cash. The voucher is handed to the worker on pay-day, is presented as identification at the paymaster's office, and is promptly cashed. E. M. Statler, whose management of Hotel Pennsylvania is much the same as that of his four hotels in the Statler chain, has found cash to be the only desirable system of payment in all his hotels, which aggregate a total of about five thousand workers. Fluctuation of labor, the extra force who are called on to help out in the Banquet Department and the fact that many of these people have no banking connections make payment by cash a necessity.

For purposes of privacy a special pay-roll for executives is maintained but A. W. Baylitts, assistant to Mr. Statler, often finds it necessary to make arrangements with some of the banks so that new executives can open an account.

Practically these same conditions have been found to exist by the Bush Terminal Company in New York City, who use the same system of private pay-roll for their executives, who are paid monthly by check, while the rank and file receive their money in cash each week. Another argument worthy of consideration was advanced by the cashier of the Bush Terminal Sales Building as reason for paying executives by check. This was the elimination of the major part of the sum from the cash pay-roll, thereby reducing the risk incident to handling so much cash. An interesting feature of the payment in this building is the fact that the people are not paid on Saturday, another day of the week

having been chosen in its place, thereby reducing the loss by hold-up men.

But there continue to exist many conditions under which neither the cash nor the pay-draft appear to fulfil all of the requirements. These conditions arise when an organization has many scattered plants of diverging interests, located in situations where individual conditions govern the system of payment and where the personnel is so varied in character that considerable flexibility must be exercised in meeting the emergency.

As an example of how a large organization solved its problems of meeting all local conditions no better instance can be cited than that of the policy now in force by the American Smelting and Refining Company, in whose extensive offices, widely distributed plants, and mines, can be found all classes and types of employees.

According to William A. Loeb, Jr., vice-president, the company has found a solution in the following broad-minded handling of the situation: All employees are allowed more or less choice as to the manner in which they receive their money. Due to the varied conditions under which they work, the difference in environment, racial characteristics, and the varied types of labor, it would be almost impossible to designate any arbitrary rule of payment. For example, in the Mexican plants most of the common labor is paid every day. This is a custom of the country to which it is desirable to adhere and is due to the fact that the men only work a day now and then and do not come back until they are out of money. The natural result is a very high labor turnover but as the work is more or less mechanical it does not affect the company's interest as seriously as it might in some other department. Because of this continual shifting a

unique system of celluloid checks has been introduced. These are numbered and are given to the men when they start work, and when they pass through the office at night to receive their money they turn in the checks. Quite naturally these men are paid in cash.

In South America payment is made much as it is in the United States. Lower salaried men are usually paid twice a month, the higher salaried men monthly, and common labor weekly, but in all cases they adhere to whatever custom seems most desirable for their men. A rough estimate places it as about evenly divided between cash and check, although inasmuch as they have between thirty and thirty-five plants and mines, and employ a force of about 13,939 men during 1919, their personnel being widely scattered, it would be difficult to state the proportion definitely. Here as elsewhere the higher salaried men prefer to receive their money by check, while the lower salaried men prefer theirs in cash. In this organization a workman is allowed to draw his pay at any time in cash, in case of an emergency, without any deductions being made. This obviates his being obliged to accept a discount when cashing a check or pay-slip at stores or banks.

But all preceding pay systems appear simple when one reviews the complications incident on paying off a force of men not only of different occupations, varied nationalities, and who are scattered all over the world, when pay-day comes around, but where certain rigid and established rulings must be officially observed.

In the International Mercantile Marine they use every form of conventionalized payment, pay-draft, cash, and even the brass check, which is used for identification purposes among

the lower type of dock workers. From the stately dignity of the captain of the majestic ocean liner, whose check is handed to him at the office at the end of his voyage, down to the uncouth stevedore who shambles up to the pay-window lacking even the individuality of a name, each type of payment has been carefully studied out to fit the exigencies of that particular department.

For forty-eight years M. W. Tingley, Comptroller, has made a study of the various emergencies that arise in an organization of this character and has built up a remarkable system. Because of the fact that this company handles both passengers and freight, its solution of the problem presents more than the usual number of angles.

It has been found advisable to pay the men only at the end of the round trip, although they may have advances made to them for shore leave at any port. Under these circumstances the rates of exchange are computed as on the days when the money was given them.

The men of the sea may only be paid in the presence of the shipping commissioner, to whom they make all complaints regarding their pay, advances, remission of fines, etc. This man is in supreme authority and may adjudicate according to his best judgment. His word is final. The fairness of these men is reputed to be one bright spot in marine life.

Before the ship docks the purser or captain's clerk has the pay-roll complete. As soon as the boat is tied up this is passed on to the paymaster on the dock, who telephones the amount needed to the office. When this is secured the paymaster and shipping commissioner board the boat, the men form in line and receive their pay, and sign the pay sheet. On the freighters the captains and officers are paid in

cash with the men. Each ship has what is known as "ships' articles," which each member of the crew must "sign on" and "sign off" before a shipping commissioner. Each member also has a "card" which contains his picture and serves both as his certificate of service and also as a passport.

The paying of the stevedores, who load the holds of the vessels at the various wharves, has probably presented the most serious problem of the entire system; for not only are they the lowest possible type of men, but they are of so many races and creeds that it is often impossible even to designate them by name. Negroes, white men, Mexicans, and Chinese, they all look alike after the tearing, racking strain of trucking freight into a dark and stifling hold.

In Antwerp, according to the laws of the country, they must be paid every day, due to the fact that they are a transient lot and work only a few days at a time. Often their names are utterly unpronounceable or they have adopted some name that will not easily lead to identification. In this country the John Smiths are so numerous that they are frequently given consecutive numbers on the pay-roll to identify them. When the situation loses all diplomatic possibilities the timekeeper simply resorts to brass checks, which are numbered consecutively and, like the Mexicans, they get them in the morning and turn them in at night when they get their pay. At all times the foreman of the gang stands beside the paymaster's office and identifies them as they appear. Cash is naturally the medium of payment.

In working out the various problems that attach themselves to the office of paymaster, while each one has his individual conditions to consider, there seems to be a peculiar uniformity in the general decision. Succinctly summing up the situation it is safe to say that in practically all cases where the employee is receiving \$1,800 a year or less and is near at hand, for factory workers and mechanics, department store employees, office workers, hotel help, especially where foreign birth must be taken into consideration, and in fact for labor under general conditions, cash is more desirable both from the standpoint of the worker and that of the employer.

On the other hand, where employees are at a distance, where their work takes them through thinly populated districts or keeps them in isolated places, where they are not so located as to safely keep in their possession any great amount of cash, for executives where privacy in amounts and form of payment seem to merit consideration and add dignity to their office, the check seems to be the more suitable form in which to present their pay. From the standpoint of the employer the check offers itself as the suitable form of payment where plant environment or paying conditions make the transportation of amounts large enough to cover their pay-roll a matter of anxious precaution and expensive supervision, and while the labor and expense incident to check payment may cause a little increase of expense in handling, this would be readily offset by the cost of the extra protection and the occasional loss, therefore it might justifiably be charged up as internal insurance.

MERCHANDISE INVENTORY AND SALES ANALYSIS

BY WALTER L. LUND*

IN every business the taking of inventory is a more or less irksome task which disorganizes the daily routine. In wholesale and manufacturing businesses the simplest solution of the problem is to close down for a brief period for the purpose of concentrating the energies of minor executives and clerical workers on the inventory job until it is completed. In the retail and mail-order fields business operations cannot be suspended in this way. Means must be devised of dovetailing the work of taking inventory into the regular routine and much preparatory work and careful planning are required if the annual or semi-annual stocktaking is to be both speedily and accurately done. This article describes the methods employed in the taking of the semi-annual merchandise inventory and subsequent sales-analysis in a large mail-order house, where the multiplicity of the lines handled and the volume of daily orders complicate the problem and make difficult the combinations of accuracy and dispatch.

The inventory is taken on the last days of June and December in each year at all houses; factories and warehouses and all accounts on the books are closed on these dates. The careful study of just what has to be done, how best to do it and who shall be held responsible for the various details has enabled the concern to complete the task in about six hours. This dispatch has been brought about largely by the use of a special form of inventory book and also by the publication

of a book containing detailed instructions of the work to be done in all departments.

In the analysis it has been found convenient to divide this work into three phases:

1. Preparatory work to be done before the day on which inventory is taken, such as the printing of books and forms, issuing instructions to the office force, arranging the stocks and auditing the warehouse records.

2. The work to be done on inventory day which consists chiefly of the counting and pricing of stocks and the compiling of reports covering cash assets and liabilities.

3. Work to be done after inventory day such as the disposition of the inventory books, the compiling of statistics, and the summarizing of the inventory figures.

The superintendent of merchandise at each house is held responsible for all preparatory work and for the preparation of the reports and accounting statements relative to the inventory taken at his house and in warehouses containing merchandise charged to the Purchase account of his plant. Similarly the managers of factories are held responsible for the inventories taken at all factories and the manager of the foreign division is responsible for the inventories in his departments. The summary reports of each branch, warehouse, or factory are sent directly to the general auditor of the company. This information is then transmitted to the superintendent in charge of the division whose duty it is to see that the proper entries are made in the inventory and cost books.

We carry large stocks of merchandise

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in public warehouses throughout the country for the purpose of making direct shipment to customers from these locations. A perpetual inventory on all such items indicates the exact quantity on hand at any time. At inventory time we require a listing from each public warehouse so that our records can be verified before entering quantities in our inventory books.

To assist the merchandise divisions and to insure that no merchandise is overlooked the general receiving division ceases sending incoming merchandise into the merchandise divisions after the close of business the second day prior to the taking of inventory. By so doing we are able to check and place all new merchandise in its proper place and establish necessary records before beginning the actual count. All invoices covering the merchandise held in the receiving division after the last dispatch has been made are written up and charged to the ensuing six months' business.

Customers' orders received in each merchandise division the day before inventory are promptly filled, wrapped, and dispatched to the packing floor for shipment. An extra effort is made to fill every possible order the night before the taking of inventory, due to the fact that under no circumstances are any orders filled from 8 A.M. to 2 P.M. on the day of inventory. Tube service, conveyor belts, etc., are absolutely closed down.

II

About three months before each stocktaking the general auditor dispatches a letter to the chief executives inviting suggestions for improvements in methods of taking any part of the inventory or for revisions in the detailed instruction book. Such re-

visions are made necessary by the creation of new activities or through changes in some operating function which has affected the inventory since the previous publication of the instruction book.

The superintendent of merchandise keeps a register recording by division number the allotment of inventory books delivered to the merchandise divisions. Specimen sheets are also made out in his office showing exactly how the entries are to be made under the various column headings of the inventory books. This idea has proved very helpful in that all our people assigned to the entering of figures are taught to make entries in a uniform manner throughout the house, thereby assisting the forces employed in making the extensions as well as maintaining accuracy. The instruction books, the specimen sheets, and the inventory books in which quantities of merchandise are to be listed are then delivered to the superintendents of the merchandise divisions with instructions to proceed as soon as possible with all preliminary work.

Before the forces in the merchandise divisions begin their preparatory work the division superintendent is required to call a meeting of those assigned to the work, at which the specimen sheets are discussed and all details relative to the taking of inventory are read, so they may all have a clear understanding as to the requirements of their work.

Our present form of inventory book is a simple one and almost self-explanatory. The headings in their sequence are: Catalogue Number, Quantity, Unit, Inventory Cost, Unit, Cash Discount, Extension, Amount of Depreciation, Unit, Total Depreciation, Net Expansion, Classification.

It is well to describe the policy and rules governing the application of a few of these headings.

inates any possible error of overlooking the counting of open reserve stock wherever located. Long in advance of the time for taking inventory these cards and envelopes are prepared, numbering one white card and envelope with each catalogue number of forward stock and using colored cards and envelopes for such numbers as our records indicate a reserve stock is on hand. The information shown on these cards and envelopes is "catalogue number, quantity, counted by" When the first count is made the person responsible for it enters the quantity of merchandise in the column provided on the card and after affixing his signature encloses the card in the envelope which is then sealed and fastened to the stock shelf or receptacle containing the merchandise. The outside of the envelope is printed the same as the card. When the second count is made the quantity on hand, and the signature of the person making the count is entered on the envelope. These cards and envelopes, when they are prepared, are also numbered consecutively by means of a numbering stamp, and after inventory count has been made they are sorted in numerical order for the purpose of detecting any card or envelope which may have been lost or misplaced. By this means the identity between cards and stock locations is very readily established.

Merchandise carried in case reserve stock is inventoried from our warehouse records by first listing all cases in warehouses by case numbers (taken from each case) and then comparing these numbers with the entries in the warehouse records. In the event that merchandise has been removed at any time from a case, this case is immediately brought to the open reserve stock located in the division proper and emptied. At inventory time all cases

which show evidence of having been tampered with or of any part of their contents having been removed are opened in the warehouse where their contents are counted.

IV

Let us now assume that it is 8 A.M. on June 30. The division superintendent and his supervisors are carefully looking over their division to see that all aisles are clear, that merchandise is properly piled in reserve stock, that the forward stock bins are in a tidy condition, and that the inventory personnel is lined up for the day's work. The counting forces assigned to the various aisles proceed immediately to make the first count, making entries on cards as heretofore described. As one force finishes the counting in an aisle another force changes place with it until a double count has been made in all aisles. Stock men are taking a similar inventory on case goods located in warehouse reserve stock.

All envelopes used in the counting of inventory remain attached to the merchandise until the division superintendent is satisfied that the entire count for his division has been made. When his approval is granted the envelopes are removed and brought to the office of the merchandise division, where a representative of the merchandise office compares the count of merchandise as shown by the envelope with the figures indicated on the card. Any discrepancies are corrected by making a recount, and this process is continued until the representative of the merchandise office is satisfied that the division can safely be authorized to proceed with the listing of the merchandise in the inventory books. The average time taken to make a complete count of stock together with correc-

tions due to recounts is, as before stated, approximately six hours.

While the count is proceeding, the merchandise division's clerical force lists and makes a report to the superintendent of merchandise as follows:

1. Total cash or credits due customers on all unfilled orders in the division.

2. Value of merchandise at selling price on order to be shipped direct to the customer from some outside factory, covering merchandise for which sales have been credited and invoices charging Purchases have not as yet been received.

3. Value of merchandise sent out of the house on memorandums, which later is to be returned, such as merchandise sent to engravers to be photographed, etc.

These are the only reports made by the merchandise divisions.

From 8 A.M. to 9 A.M. on the same day all clerical divisions make a listing of cash assets and liabilities on forms provided by the superintendent of merchandise. These forms define the character of listing to be made and clearly state just when listing is to be made and reports delivered to the superintendent of merchandise. The clerical divisions involved, their functions, and their relation to the inventory are as follows:

Mail Opening Division: Where incoming orders are opened and cash is listed.

Relation to Inventory: Cash on all orders remaining on hand after last delivery to the reading division the day before inventory to be listed as amounts due customers.

Reading Division: An office where all incoming mail is read and sorted.

Relation to Inventory: Cash on all orders remaining in the reading division after the last dispatch of orders to be listed as amounts due customers.

Entry Office: Its function is the entering of orders.

Relation to Inventory: Cash appearing on all orders after last delivery to dispatch division to be listed as amounts due customers.

Dispatch Office: Its function is to dispatch a certain number of orders to all divisions every ten minutes.

Relation to Inventory: Cash appearing on all orders remaining in the dispatch division after last delivery has been made to the merchandise divisions to be listed as amounts due customers.

Credit Division:

Relation to Inventory:

- (a) Value of C. O. orders remaining outstanding.
- (b) Value of certificates of indebtedness outstanding.
- (c) Cash or credits appearing on customers' orders not dispatched through the house before close-down period.
- (d) Total value of employees' charge accounts outstanding.

Correspondence Division:

Relation to Inventory: Cash or credits appearing on all customers' orders in the order-holding file; that is orders received on which the information was insufficient to enable us to fill orders intelligently, necessitating writing for additional information.

Transportation Division:

Relation to Inventory:

- (a) Listing all amounts due railroads and express companies.
- (b) Cash or credits on all customers' orders.
- (c) Value of presented claims and unrepresented claims outstanding at the close of business on day of taking inventory.

After the above listings have been made on their proper forms by clerical divisions, the routine of business is resumed but no orders or papers of any character are sent to the mer-

chandise divisions until such a time as permission has been granted by the superintendent of merchandise. As a general rule by 2 P.M. on the afternoon of taking inventory, permission is granted to dispatch merchandise from the receiving division to the merchandise divisions and to resume the dispatching of orders through their regular channels.

V

The packing floor is allowed until noon on inventory day to pack, bill, and ship all merchandise received from the various order-filling divisions on the previous day, after which time listings of the amounts due to customers are compiled and dispatched to the superintendent of merchandise.

The clerical activities relative to inventory counts are very simple and require but little time in their tabulation, therefore we will revert to the merchandise divisions and study the entering of the inventory.

Clerks delegated to the entering of inventory are supplied with the following explicit instructions: "Enter all catalogue numbers in numerical order. Where there is none of a quantity on hand enter 0. Be sure and show the unit of quantity such as each, dozen, gross, etc. Describe the item briefly. Be sure all items are priced. Enter cash discount on the line directly below the price. If there is no cash discount mark column 'Net.' Entries of depreciation must be made in red ink. Be sure each item has a classification number. Make certain that classification numbers 101, 105, and 106 have a cross-reference number to indicate the particular classification to which they refer, for example, 101-8, 105-6. It frequently occurs that at inventory time it is decided to transfer items of merchandise from one division to another, at which time the

inventory book is labeled 'Effectivemerchandise listed in this book is to be charged to Division..... Purchases and credited to DivisionPurchases.'"

After all entries have been made in the inventory books, the quantities shown therein are checked against the quantities of merchandise, as evidenced by the figures appearing in the division's stockbooks, in order to detect errors in entries covering quantities, denominations, etc. The books are then referred to the superintendent and the heads of stock of the division, who examine the entries superficially before the records are delivered to the office of the superintendent of merchandise. All merchandise divisions are allowed three days to enter quantities, check the figures against stock records, price the inventory, recheck depreciations, and make the necessary examinations.

VI

After the inventory books are received in the office of the superintendent of merchandise they are checked against the register, inspected to see that all rules and regulations have been correctly carried out, and then given to the chief clerk of the auditing division who is directly in charge of the work pertaining to the extensions, footings, etc.

A force of comptometer operators is employed on the footings and extensions. The first set of footings and extensions is made up by pages and listed on strips of paper. These strips are given to the supervisor in charge and the book is passed to another operator who makes the same footings and extensions, entering the figures in their proper columns in books. This gives a double check. Comparisons are then made and errors, if any, corrected. The chief clerk refers the

SALES ANALYSIS SHEET

A general summary is then made showing, by divisions, the total amount of investment by inventory classifications. This report is transmitted to the superintendent of merchandise, after which all inventory books are ready for inspection by a firm of certified public accountants. The figures representing the value of merchandise in transit are then compiled, the amounts on reports representing Purchases are credited or debited to their proper account, and the amounts due from customers and amounts due to customers are handled in the Sales account in like manner. Inasmuch as our methods of closing the accounts do not differ from the methods used by other large corporations, they are of no

particular interest and need not be described.

After the inspection of the inventory books, and after all miscellaneous accounts have been examined by the representatives of the certified public accounting concern to the extent that warrants them in approving the accuracy of all figures in the inventory, the financial statement of the company is issued.

VII

After the figures relative to the inventory have been accepted all merchandise divisions immediately make up a sales analysis. This record has little or nothing to do with the taking of a merchandise inventory, but as we find it of vital importance as a guide to future sales policy, it may be of interest to others. The action based on the figures of the sales analyses

generally results in securing more turnover, which gratifying result shows itself when the next merchandise inventory is taken.

The sales analysis shows by items, pages, and inventory classifications: Quantity of merchandise on hand at time of taking inventory, quantity sold during the past six months, selling price, cost price, total sales, gross profit, cost of space, percentage of gross profit, and percentage of publicity. These figures are first tabulated on typewritten sheets and then pasted on interleaved pages in sections of the catalogues arranged for the convenience of the buyers and the publicity department. The figures are of valuable assistance in determining the salableness of merchandise to be quoted in future mediums, as well as in making quick disposition of unprofitable items.

SPECIAL STEPS IN STORES CONTROL

BY S. C. FOLKS*

THIS article is to supplement the more general one on "Basic Principles of Stores Organization"¹ by L. F. Boffey. Dealing as it does with the specific steps, it is a report or outline of the system used by the mill supply store division of the stores department of the American Rolling Mill Company.

Before the requisitions for the purchase of material or any other form in the record control of stores is discussed it may be well to outline the personnel of the office force and of the receiving department.

When material is ordered by outside departments, that is, foundry department, maintenance department, engineering department, and others, a requisition is made out (No. 1) and sent to the office of the superintendent of stores in triplicate, except in the case of castings ordered on foundries other than our own; in this case they are sent in quadruplicate. These requisitions are numbered consecutively, and the departments have different initials to use as a prefix on their series of numbers. The maintenance department

PERSONNEL

OFFICE

Asst. to supt. of stores

Having general supervision over all office work and records.

Follow-up clerk

Carrying a follow-up on all orders.

Invoice clerk

Passing all invoices to the accounting department.

Price desk organization

Consists of chief price clerk with price clerks under him, handling the pricing of requisitions for material drawn from the store.

Stenographer

Clerk

Foreman in charge of farms

Having charge of Farms No. 1 and 2.

Teamsters

Farmer

Gardener

RECEIVING DEPARTMENT

Asst. to supt. of stores

Stores foreman

Having charge of ordering all material for mill supply stores.

Counter clerks

Dispensing material over the counter.

Stock clerks

Watching and counting stock in stores.

Receiving clerks

Receiving material and reporting same to the office on proper write-ups.

Receiving clerk at stores warehouse dispatches trucks.

Yard foreman

Supervising stock in the yard; charge of yard labor and dispatching teams.

* Superintendent of Stores, American Rolling Mill Company, Middletown, Ohio.

¹ See *Administration* for January, 1921, Page 11.

REQUISITION FOR MATERIAL.		No.
PLEASE ORDER THE FOLLOWING MATERIAL AND CHARGE ACCOUNT No.		
..... 192		
DESCRIPTION OF MATERIAL REQUIRED		
THIS REQUISITION MUST BE SENT TO THE STORE DEPT.	ISSUED BY: Supt. of Dept.	PASSED BY: Supt. of Stores

No. 1. REQUISITION BLANK

has the letter "E" as a prefix to its numbers, the foundry department the letter "M," the engineering department the letter "D," etc.

The original of the purchase requisition having been O K'd by the superintendent of stores is sent to the chief price clerk who enters the material, except on very special orders, on the stock books and forwards it to the purchasing agent. The duplicate of the requisition is held in the office files; the triplicate of the requisition is sent to the receiving clerk who is to receive the material.

In the case of castings ordered on our own foundry, the purchase requisition, (No. 1) is sent to the superintendent of foundry. If the castings are to be made by some foundry other than our own, two copies of the requisition are sent from the store office to the superintendent of foundry who retains one copy in his file and forwards the other copy to the purchasing agent, one copy is retained in the store office files, and one copy is sent to the receiving clerk who will receive the castings.

The sending of the requisition for

castings to our own foundry office enables this office to have a complete check on all casting records whether the castings are to be made in our foundry or in other foundries.

When the chief stockkeeper is in need of material he sends a card into the office (No. 2) showing the quantity and kind of material to be ordered. From this card the stores purchase requisition (stores department uses "S.O." as a prefix to their requisition numbers) is made out in triplicate, one copy for the store office files, one copy for the receiving clerk who is to receive the material, and one copy, having been O K'd by the superintendent of stores, is entered on the stock books by the chief price clerk and sent to the purchasing department.

All purchase requisitions before going to the purchasing agent are registered in a requisition register by number, using the prefix to the requisition number as a guide.

The purchasing agent, upon receipt of a purchase requisition, makes out a regular purchase order (No. 3) on our suppliers. Four copies of the purchase order form are sent to the office of the

STORE DEPARTMENT

F. U. Dates

S. O. No. _____

Order No. _____ Date _____ Date _____

Material _____

Supplier _____

Shipment Promised _____ Shipped _____

Revised Promise _____ Via _____

Remarks _____

ORDER FORM

Date _____

Material _____

Max. _____ Amt. in Stock _____

Min. _____ By _____

Remarks _____

NO. 2. CARD SHOWING QUANTITY AND KINDS OF MATERIALS ORDERED (face and reverse).

superintendent of stores, the first copy of the set is kept in the office in an order book for follow-up purposes, two copies are sent to the receiving clerk who will check the material upon receipt, and the fourth copy is forwarded to the maker of the requisition for checking against his requisition, and is retained in his files.

II

When the purchase order is received from the purchasing department the purchase order number and also the name of the firm on whom the order is

placed is entered opposite the requisition number in the register. This is to enable us to tell for outside departments or for the superintendent of stores on what firm an order is placed covering any given requisition number.

When purchase orders are received by the follow-up clerk, he makes out a follow-up card for each order, (No. 2) provided he does not already have one. This card shows the name of the supplier, order number and date of the order, and is filed in a daily tickler file three, four, or five days ahead of the order date. A notation is made on the purchase order of the date under

When material is received by the receiving clerks, it is immediately written up as to quantity and quality on their copy of the purchase order and is forwarded promptly to the follow-up clerk who notes the date of receipt on his order; he passes it to the chief price

In event a purchase order calls for more than one item, the receiving clerk writes up the items received on a copy of the purchase order form and notes the items on the other copy of the purchase order form, forwarding the first copy to the follow-up clerk, retaining the second copy in his files, and reporting all subsequent receipts on that order on Form 4. This is necessary by reason of the fact that when

No. 4. REPORT OF RECEIVING MATERIAL

firms make more than one shipment on one order they invariably invoice the shipments separately as made. Therefore, if we waited until all the material had been received before passing invoices covering the order, we would delay the passing of invoices and would lose cash discount on them.

III

Invoices are ordinarily passed when they are covered by write-ups which have been received from receiving clerks, but in the case of special material of high price, the duplicate of the invoice is sent to the superintendent of the department ordering the material for his O K so

that we will be absolutely sure that the material is all right before the bill is paid. All invoices covering material are charged into stores stock. If the material is very special and is taken out by the department ordering it immediately upon receipt, the requisition is priced from the invoice and the write-up which goes to the price desk is stamped "No Card;" then no entry of this material is made on the price books.

When material is received by the receiving clerk he checks it in and sends in a write-up as described above, then turns the material over to the chief stock clerk who places it in stock. Bins containing this material have receptacles in front for 3 x 5 plain white cards. When material is placed

in a bin, description and complete specifications are typed on the card. Back of the white card in the receptacle is a red card. When material is getting low the red card is taken out and placed in front of the white card which gives the stock clerk this information and enables him to replace the supply. When the material is again received, the white card is placed in front.

When material is taken out of the store over the counter, the party desiring the material must have a requisition, (No. 5)

signed by someone in his department who is authorized to sign requisitions of this kind. In most cases men signing stores requisitions are foremen or

Date		Dept		Account Symbol	
CHARGE TO					
Quantity	DESCRIPTION OF MATERIAL			Price	Location
Purchase Order No.		Purchase Requisition No.		TOTAL	
FILLED BY		SIGNED			

No. 5. REQUISITION

sub-foremen, and of course superintendents and assistant superintendents of departments. The material is then delivered to him and the requisition is placed in a box until the end of the day.

All requisitions, (No. 5) are turned over to the chief price clerk who in turn distributes them to the price clerks who price them and make deductions on stock records. These stock books are loose-leaf, and the sheets are as shown in No. 6. After the item is priced and the deduction is made from the stock records, it is then extended by the price clerk. All extensions on requisitions are checked by a price clerk delegated to do this kind of work each morning. The requisitions are then symbolized from card of

accounts by the chief price clerk, and the originals are torn from the duplicates and sent to the superintendent of the department for whom the material was drawn, and the duplicates are sent to the stores accounting department. In cases of requisitions charged to work orders, both the duplicates and the originals of the requisitions are sent to the stores accounting department.

Price clerks in making deductions of material from the stock books watch the column balance on hand very carefully, and when the stock reaches the minimum point set for it, the price clerks send a card to the chief stock clerk, (No 2) which shows the amount of stock which is on hand and the maximum and minimum which has been set for it. The chief stock clerk then uses this card as a medium for ordering, sending it back to the office specifying the amount to order. The reverse side of this form is made up to act as a follow-up card on the material,

after an order has been placed on the supplier.

IV

The store sells material over the counter to employees at invoice cost, plus 6 per cent freight and handling charge. The employee desiring material makes out a requisition for what he wants, signs his name and check number to it, and presents it at the counter. Counter clerks fill this requisition, obtain the cost of the items from the price section, and then tear out coupons covering the amount in full from the coupon book presented by the employee. These coupons are attached to the requisition (No. 5) and the number of the coupon book is put on the requisition. Requisitions and coupons are turned into the office from the stores and garages once a day. Here the coupons are detached by a clerk who counts them to see that the amount is correct. The requisitions then go to the price desk for deduction

Max _____						E. S. _____	
Min _____						C. W. _____	
Order at _____							
ORDERED		Received	On Hand	Amount	ISSUED		
Req. and Shipper					Charge	Date	
No. _____	P. O. No. _____						
	Price _____						
No. _____	P. O. No. _____						
	Price _____						
No. _____	P. O. No. _____						
	Price _____						
No. _____	P. O. No. _____						
	Price _____						
No. _____	P. O. No. _____						
	Price _____						

from stock records, and the coupons are sent to the stores accounting department to act as a credit on stores stock.

Receiving clerks make shipments from our plant from time to time. We do not make enough shipments from this department to justify a shipping clerk.


If we place a purchase order covering the repair of, say, Carbo-Hydrogen Burners, we place a requisition covering the repair of Carbo-Hydrogen Burners. This requisition is placed by the purchasing department of the Carbo-Hydrogen Company, Columbus, Ohio, and when the stenographer receives a copy of the purchase order placed on this firm, she makes a shipping order on the receiving clerk covering the shipment of burners to this company. These shipping orders are as shown in No. 7, and are numbered consecutively. They are made in triplicate, and the original (white) and duplicate (pink) go to the shipping clerk, and when he has made shipment he

returns the original shipping order to the office, giving a notation as to the weight of the shipment, what routing was used, and the date of the shipment. He retains the duplicate copy of the shipping order in his files. The triplicate (yellow) never leaves the office, but is carried in the files there. When the original shipping order, properly filled out as to routing, weight of material, etc., is turned over to the chief price clerk who has the items properly priced and deductions made from stock records, he in turn sends it to the stenographer who enters on the triplicate copy in the files the price, date of shipment, routing, etc., and after it has been O K'd by the superintendent of stores forwards it to the stores accounting department.

We use this system in shipping all material from this plant, that is under the jurisdiction of this department. I mean by that, material that is not covered by order department orders which are for production material. This record enables us to keep a com-

ORIGINAL		STORE DEPARTMENT SHIPPING ORDER				
TO		PLEASE SHIP COLLECT the material				
Mentioned below to		Per				
Address		And return original and duplicate of this order with shipping notations duly filled in and with bills of lading attached				
DATE		STOREKEEPER				
DESCRIPTION OF MATERIAL TO BE USED.		SHIPPING REPORT		INVOICING NOTATIONS		
		QUANTITY	WEIGHT	PRICE	PER	AMOUNT
Purchase Order No.		Date of Shipment -----				

No. 7. SHIPPING ORDER



INVENTORY ASSEMBLY CARD

Date _____

ARTICLE	LOCATION	Sec.	Bin.	Qty.	Total	Previous 3 Months
	East Side Central Warehouse					
	East Side Central w					
	East Side Central Warehouse					

No. 8. CARD OF PERPETUAL INVENTORY SYSTEM

plete check on the material we ship out for repairs or samples to our customers.

Material made in our machine shops for use in our plant is made on shop orders emanating either from the store office or from an outside department office. The material is delivered direct to the stores. The cost department vouches the stores department at the end of each month for all material made in the shops during that month. It is therefore necessary to enter both the quantities and prices of material of this character in the stock books in order to keep a check on it also.

Material in the manufacturing department, that is, in the production department or in the factory department, is made upon an interplant requisition; the original of the interplant requisition being sent direct by the department issuing it to the cost department and the duplicate to the department that is to furnish the material.

Material of this kind is also delivered to the stores department and at the

end of the month or as soon as the cost records will permit, the original of the interplant requisition is sent to the stores, showing the cost of the material. This cost is entered on our price books the same as an invoice.

Castings made in our foundry are also vouchered to the stores as soon as cost records will permit, and price entries are made on them.

Every day a number of items are written up in quadruplicate on the typewriter from the stock books on No. 8. One copy of the form goes to the inventory clerk at East Side, one to Central Works, one to the Stores Warehouse, and one is retained in the office. All of the material specified on the sheets given out for one day is inventoried on the next day at all three places. The sheets are then assembled and all like items added together on the master inventory sheet. This master inventory sheet is then returned to the office showing the total amount of all material specified on hand. This total amount of inventory is entered on the price books at the end of the fiscal year.

CONTROL OF ABSENTEEISM

BY PHILIP SARGANT FLORENCE*

MANUFACTURERS have long been concerned over the great losses resulting from a high rate of turnover. But it is only recently that attention has been seriously directed to the high rate of absenteeism which, in many cases, has been more costly than turnover. Investigation into the causes of absenteeism and the remedies which may be applied are still in their primary state, but even with the limited experience available, much can be accomplished to check this hindrance to efficient conduct of the plant.

Absenteeism should not be confused with turnover, though they may be said to supplement each other. Absenteeism may be defined as the temporary physical absence of an employee from the plant including any time lost at the beginning of the working period on account of tardiness. Turnover is the rate at which men pass in and out of an organization. It is a question of whether a man is hired or not hired and whether he stays or quits. But a man may be considered an absentee only while he is in the organization, after he is hired, and during his stay. A certain amount of turnover inevitably creeps into the absentee records as we shall see later, but it is essential that this "latent" turnover be eliminated as early as possible. Absenteeism might be extended to cover certain other interruptions in the work of the plant as, for instance, strikes. This also we shall discuss later.

The cost involved in each hour's absenteeism may be assigned first, to

the direct office expenses of realignment, that is, the process of securing a substitute for the absent worker and meanwhile the inevitable interference with the working schedule; and second, to the excess overhead charges from reduced productivity per given equipment and organization.

A substitute worker can quickly be found if a reserve force of men is held for emergencies. Manifestly a special understudy for every job in the factory would be too costly. But where there are many jobs of the same nature and employees are trained to do more than one job, the cost of reserves is greatly reduced. A reserve force of ten for a hundred similar jobs would probably be ample, and these ten could be working at other jobs when not filling vacancies. Reserves are particularly important where work is done in gangs. Here the cost of absenteeism, including tardiness which holds up the work of the entire team, becomes additionally heavy unless the "broken squad" can be filled out immediately. This question was the subject of urgent inquiry in the British shipyards during the war.

Realignment also involves additional clerical expense in the personnel department to cover the notification of the absence, records of the available substitutes, and machinery to get the substitutes at work. If the employee gives previous notice that he will be absent, or sends in a telephone message as early as possible when the absence is unexpected, delay in realignment and consequent costs will be greatly reduced. Realignment, however prompt and efficient, cannot entirely obviate

* Bureau of Personnel Administration, New York City.

overhead expenses. Uncertainty as to whether a man is not going to report for work at all or whether he is merely tardy causes an inevitable delay to start with; the substitute, moreover, is likely not to be so skilled or practiced at the job as the absent worker.

But suppose that no attempt is made to replace the absent worker. Is the normal overhead cost greatly increased? Let us suppose an absentee rate to be 15 per cent when it could be reduced to 5 per cent. What are the *prima facie* results on cost of this 10 per cent of superfluous absentees?

1. Wages are 10 per cent less.
2. Output is reduced 10 per cent.

These two items at first glance seem to balance each other. Indeed we have heard superintendents and foremen stoutly maintaining an "I-should-worry" attitude; it makes no difference to the company if employees want to lose their pay. The fallacy in this view lies in assuming that the wages of direct labor constitute the only cost entering into the production of any article. The nonchalant foreman would certainly have changed his tune if all his men had stayed away, that is, if they had gone on strike. It would then have been clear that all foremen, all the administrative staff, all factory buildings, stores, machinery, and equipment of all kinds were lying idle. Thus it is evident that with an increase of 10 per cent in absence—

3. An additional 10 per cent of the equipment is rendered idle.
4. An additional 10 per cent of the administrative staff is idle.

Equipment and the administrative staff must be maintained up to the normal working standards and cannot be reduced readily in proportion to a smaller attendance. The costs of these factors may therefore be considered

constant over a certain period regardless of decreased attendance and consequent lowered output. Where this decrease is 10 per cent it is clear that the cost per unit of output of the constant physical equipment and administrative staff will be increased some 10 per cent. Furthermore, the following changes would probably occur among factors which are more or less variable:

5. An additional 10 per cent of the heating, lighting, and ventilation gone to waste.

6. Where machinery is involved; an additional 10 per cent of the supplies used in keeping machinery in condition gone to waste.

7. Where the absentee is on "direct" labor; an additional percentage of "indirect" labor's wages gone to waste. (Probably not quite 10 per cent, for while the same force of watchmen, police, etc., would have to be obtained, utility men and helpers might possibly be reduced, or put onto other jobs in proportion to the "direct" labor absent.)

8. Where the absentee is on "indirect" labor; an equivalent loss would probably occur either through the "direct" laborer having to help himself or through general disorganization. This disorganization would certainly take place if a gatekeeper, timekeeper, or foreman were absent.

The importance of a proper cost accounting for absenteeism is enhanced when it is realized that the much discussed losses from failure to fill the standard working force¹ are almost identical in their burden. In fact to treat divergence from standard working force as a cost of the same nature as the cost of absenteeism, seems much simpler than to treat it as an integral part of the turnover cost as is often proposed.

This is put out merely as a suggestion, however.

¹See D. L. Hoopingarner, "Labor Loss," United States Emergency Fleet Corporation, Special Bulletin, Philadelphia, 1918.

II

How then shall this cause of so much expense be controlled? First, records of absenteeism must be kept. There is no other basis of control. Just as in heating a house, the fluctuation of the thermometer around the normal health temperature (68°) indicates whether more coal is to be fed into the furnace or drafts are to be opened or closed; so in the problem of absenteeism, comprehensive records must act as a controlling thermometer. The records of absenteeism must give numerical results; they must yield objective information uninfluenced by the opinions or prejudices of the persons who put them down.

In drawing up absence record blanks, three points should be kept in mind:

1. To save space. Note in the accompanying absence notification blank the compact arrangement for recording information both as to the kind of absence and the reason if known.

2. To make the blank fool-proof; i. e., to have the whole so clear and simple that it will be easy to make the entries in the proper columns. As largely as possible, the columns should be filled in with standard answers which can be checked by the person making the entry, and he should not be asked to write out reasons or his own opinion except where this is unavoidable.

3. To save time, especially the time of the foreman—and his temper as well. To this end it is economical to have all the entries for all the absentees in one department during a given period made on one card.

At the outset it is necessary to distinguish between the tardy and the absent employee, and for this reason the absence record sheet should not be made out until a certain period has elapsed after the beginning of the day's work. If the factory gates are closed and no one is admitted after a certain hour, this would automatically constitute the "frontier" between tar-

diness and absence, and the record would be made out at this time. If there is no such practice at the plant, a tardy limit would have to be chosen arbitrarily; let us say one hour after the working day begins.

All employees arriving during this hour of grace are counted as tardy only and are so recorded on the time clock or by the gatekeeper. They need not, therefore, be included in the absence record, which is a great saving in the foreman's time. Tardiness records should be carefully watched by the employment department and the cause learned, in order to check an undue increase. Lack of transit facilities and transit congestion might often be found to contribute to tardiness, and if such community conditions cannot be remedied, factory hours might be adjusted to meet the difficulty. The cost of tardiness is not in the number of hours actually lost by the absentee—this has been found to be a trifling matter comparatively speaking—but in the confusion caused by the uncertainty as to whether the worker will eventually show up at the plant. Tardiness should therefore be reckoned not in hours but in the number of men tardy. In this case, however, it must be emphasized that a definite limit must be drawn to the time allowed for tardiness. But where absence is for a period exceeding this limit much more accurate records will be obtained, if the absence calculation is made by hours rather than by days. If days are used as the unit a man may be counted absent at the time the daily "census" is taken, and though he may return later and work almost a full day, no record of this will appear.

III

We must assume that the foreman is provided with a complete muster of

the employees in his department so that he can easily check them over at the appointed hour in the morning and note those who are absent. He is then ready to fill out an absence notification blank such as is shown here. This single blank will record absences at the time of the muster and also absences due to accidents, sudden sickness, etc., occurring after the previous muster was called. In the first instance, if the

the foreman if the information is available to him, and if not, by the employment department which has access to the cards from the time clock.

Four general headings under "method of absence" will cover practically every case. The method or manner or kind of absence should not be confused with the reason for that absence. Each method of absence may have various reasons behind it. "Lay-

ABSENCE NOTIFICATION

No.

DEPARTMENT

DATE

I hereby give notice that the following employees on the pay-roll had not arrived by o'clock to-day or have been absent since last notification.

Signed Foreman

NAME	CHECK No.	JOB	HOURS ABSENT IF ANY SINCE PREVIOUS NOTIFICA- TION	METHOD OF ABSENCE (CHECK WHICH)				REASON OF ABSENCE IF KNOWN	REMARKS	TIME OF RETURN IF ANY THIS WORKING DAY	TOTAL HOURS OF ABSENCE
				Lay-Off	By Leave	Reported Off	Not Notified				
Jones											
Brown											
Robinson											
Etc.											

absentee was present all the previous workday, there will be no entry in column four, and it will be evident that his absenteeism began on that very morning. If his absence began sometime during the previous day he will be entered in column four, and whether or not he was able to return to work on the following morning (i. e., on the day the record is made) will appear in the next to the last column under "time of return, if any, this working day." This column should be filled out for every name entered in the record, by

offs" are absences on the initiative of the management usually for business reasons—lack of materials, inventory, etc. "Byleave" would indicate that the employee had requested and the management had granted leave of absence in advance for various reasons—injury to the employee, sickness, family troubles, or vacation. "Reported off" would include all absentees who give notice of their intention to be absent without regard to the consent of the management, or send word of their absence soon after they do not report

for work. The reason might or might not be given by the absentee. "Not notified" would cover the great bulk of absenteeism; those employees who absent themselves without giving any notice or assigning any reason. In either of the last two cases the reason may be known to the foreman anyway, in which event he enters it in the

A periodic absence tabulation either weekly or monthly should be made by the employment division, summing up all the individual records handed in by the foreman in the various departments, together with any other information concerning the absentees gathered meanwhile. A form for such tabulation is suggested. One of the

PERIODIC ABSENCE TABULATION

WEEK
OR

MONTH.....

No.....

DEPARTMENTS	SCHEDULED MAN- HOURS OF WORK		HOURS OF ABSENCE BY SPECIFIED PROCESS						REASONS FOR ABSENCE IF KNOWN				TOTAL HOURS OF ABSENCE	PER- CENTAGE RATES OF ABSENCE
	Normal	Overtime	d	e	f	g	h	k	l	m	n			
a	b	c											p	
						Not Notified								Formula $\frac{p-d}{b+c}$
			Lay-Off	By Leave	Reported Off	Followed Up	Not Followed Up	Sickness	Industrial Accident	Dissatisfied	Others			
1. Foundry														
2. Machine Shop.														
3. Toolmaking . . .														
Etc.														
Total plant..														

proper column. If the last of the four columns is checked and no reason is assigned, the case is then passed to the personnel or employment department for such methods of "follow-up" as they care to use. Frequently an intelligent foreman may have a decided opinion about the absentee which he will enter under "remarks," such as "Man not worth while," or "Unreliable worker," thus affording a helpful guide to the department next dealing with the record.

reasons for reckoning absenteeism in hours rather than days becomes apparent when it is seen that the scheduled man-hours of work are divided between the normal factory hours and the overtime worked. It is quite necessary to reckon separately all hours scheduled for work beyond the normal hours, e.g., overtime or Sunday work, in order that proper allowance may be made for the increased exposure to absenteeism caused by these increased hours of work. Unfortunately facto-

ries seldom keep a record of the actual hours worked; of the number of persons employed on overtime and Sundays. It is true that such records are taken in order to reckon time payments, but these records are usually not preserved beyond the period when their purpose is accomplished, and they almost never find their way into the hands of the employment department. It is advisable therefore that the foreman keep such a record to file ultimately with the employment department.

If a fair comparison is to be made between factories of different size and length of working hours, a rate of absence which will be a percentage of their total working force must be established, for it is obvious that the number of absentees varies with these varying factors.

What then are the facts necessary to establish the rate of absence and tardiness in any department or in the whole plant? First, the aggregate man-hours scheduled to be worked; second, the aggregate man-hours lost by absence; third (if the rate of absenteeism is to exclude such absence as is due to the management's deliberate policy) the aggregate man-hours lost by lay-off. From these figures the exact percentage of absenteeism can be computed thus: divide the number of hours lost through absenteeism exclusive of lay-offs, by the aggregate man-hours scheduled to be worked. In the tabulation this formula is represented as $\frac{p-d}{b+c}$, or the total hours of absence less the time lost by lay-offs, divided by the normal man-hours worked plus overtime.

The record procedure is not uncomplicated with problems. There is, for instance, the difficulty of excluding latent turnover from absenteeism. Much of the expense of turnover is frequently assigned to absenteeism, be-

cause employees are counted as absent for a considerable period before it is discovered that actually they have left their employment. The most usual type of turnover is the "quit" on the part of the employee. Quits, in times of prosperity at any rate, outnumber discharges and lay-offs very heavily. When a man quits he seldom takes the trouble to notify his employers of his intention, and there is no means of knowing that he is not just temporarily absent unless an immediate follow-up is undertaken. He could, of course, be questioned when he returns for his pay, but in the majority of cases no adequately equipped interviewer is present, and only answers of doubtful reliability would be obtained. The employee is thus regarded as absent from day to day until some arbitrary limit is reached when his name is automatically removed from the payroll. We know of factories waiting two weeks—even four weeks—before thus marking off an absentee. Obviously this is a heavy burden on the absence rate, especially if the turnover rate is high. Simple calculations have shown that under ordinary circumstances this "embryo" turnover may account for as much as a 6 per cent additional absenteeism. It is extremely probable that the unusually high absentee rates occasionally quoted are due to this adulteration.

Another element which may increase the absence rate inordinately without being an absence in the usual sense of the word is the strike. Employment departments are often puzzled as to where to place strikes on their records. They are sometimes listed under turnover. But, on the face of it, a strike is a *general absence* from the plant. The strikers themselves hope to return to the plant (under some altered condition) and have in certain recent cases spoken of

themselves as "vacationists." Unless the management actually, and not merely formally for publicity purposes, discharges all the strikers and does not take them back in the end, the strikers must logically appear on the records as absentees. The strike is in fact an absence due to the workers' ill will, and must take its place beside absence from ill health and accident.

There is no reason, however, why absence by strike should not be excluded from the general percentage rate of absence. The strike is a relatively small factor in causing lost time in industry as a whole, but the lost time is, of course, extremely unevenly distributed. Like the mine explosion which may cause hundreds of deaths in one plant, a strike as it affects any one organization tends to be cataclysmic. For this reason if for no other, days lost by strike are probably best set apart from the general percentage rate of absence.

Information as to the rates of absence in industry is by no means as abundant as that relating to the rates of turnover. The most extensive series of published absence rates

Pacific yards the lowest (none above 12.4 per cent).

The normal experience of absenteeism in manufacturing industry seems to vary all the way from 1.5 per cent to 11.3 per cent. If we include the probably somewhat abnormal English war experience of metal working plants,³ rates of 13.7 per cent and 14.3 per cent will be found. On analysis, however, the "normal" experience will not appear quite as indeterminate as this wide range suggests. We have the records of two factories which show extremely low absence rates: the Joseph and Feiss Company, manufacturing clothing at Cleveland, Ohio, and a large plant at Rochester, New York. But both these concerns have taken extreme precautions against absenteeism, and their inclusion in a general average would undoubtedly prejudice the result. Leaving these two factories out of account, therefore, we may say that in general the normal absentee rate does not fall below 3 per cent. In so far as records have been kept up to the present time, we seem able to sum up current experience of absenteeism as follows:

Absenteeism in shipyards,	between	8% and 24%
In factories where heavy work is done	"	6% " 11%
In factories where the work is light	"	3% " 8% (average about 5½%)
In factories having preventive organization—as low as		1.8%

are those for ninety shipyards during the first nine months of 1918 as collected by the Industrial Relations Division of the Emergency Fleet Corporation.² Even here the rate is not worked out on an hourly basis, but covers only full days lost. The average for the various local groups of yards varies all the way from 8 per cent to 23.7 per cent; the Eastern yards had the highest absenteeism (none below 15.1 per cent), and the

It must be remembered, however, that even such a normal absenteeism as the figures would seem to indicate, can only be normal in so far as the period from which the experience is drawn may be considered a period of normal business conditions. In times of great industrial prosperity—such as during the war—when labor is greatly in demand, employers are likely to

² See Paul V. Douglas, "Absenteeism in Labor," *Political Science Quarterly*, New York, December 1919.

³ See Thomas Loveday, "The Causes and Conditions of Lost Time," Interim Report Health of Munitions Workers Committee, London, 1917. Some of the results are summarized in Public Health Bulletin 106, page 18.

overlook a heavy absence rate rather than to discharge the absentee. But in time of industrial depression like the present when there is a great surplus of labor in the market, a stricter study of attendance records on the part of the management may be expected.

There has been little scientific work published as to the actual prevalence of tardiness in industry. In the investigation by the United States Public Health Service reported in Bulletin 106, everyone was counted late who did not qualify as absent, but who entered the gates after time. In the ten-hour plant studied, 1.56 per cent of the working force was found to be tardy on the average, and in the eight-hour factory, 0.71 per cent.

The most complete series of figures on tardiness are those obtained by the Rochester Industrial Management Council⁴ as given in the following:

By comparing the number of tardiness offenders with the average number on the pay-roll, a fair idea of the extent of lateness could be secured. During the month there were 7,026 cases of tardiness among the males as against 9,410 on the pay-roll, and 3,059 cases of tardiness among women as against 2,714 on the pay-roll. Taking the plants as a whole there were 10,753 cases of tardiness for a combined average pay-roll of 12,124 employees.

The ratio of all employees tardy each day to the total working force would thus be $\frac{10,753}{12,124}$ divided by 25 (on the basis of 25 working days to the month) or approximately 3.5 per cent.

IV

The figures available show such heavy losses resulting from absenteeism, that the question of remedying

these conditions becomes urgent. To begin with, the careful filing of absentee records is quite likely to inspire the worker—perhaps unconsciously—with a desire to be more regular in attendance. If the worker knows that a close tab is being kept on his attendance record, that he will be asked to explain his absence to the foreman or employment manager, or perhaps—a practice now in vogue in some plants—be requested to report back for duty through the employment or personnel department, he will be less inclined to stay away for the first trivial excuse that presents itself. It is possible also for the management to accomplish much by expressing commendation and appreciation publicly of those regular in attendance, and by maintaining cordial relations with the employee so that the latter will feel inclined to co-operate, especially if the problems arising from absenteeism are made clear to him. In short, if the individual worker is impressed with his own importance as a member of the whole, his feeling of responsibility is likely to be increased correspondingly.

The following may be suggested as more positive means of remedying absenteeism:

1. The follow-up, by letter or personal visit.
2. A bonus for good attendance.
3. Analysis of the records to find the causes of absenteeism, and their removal as far as possible.

If the follow-up system is adopted, the greatest care is needed in the selection of those assigned to this delicate work. Sympathetic understanding, an appreciation of the trials and worries of the individual working man, and above all an abundance of tact, are essential qualities if this branch of the organization is to escape the characteristics of a "bully," feared and despised by the

⁴ Report of Special Committee on Absenteeism and Tardiness, Chamber of Commerce, Rochester, New York, June 1918.

workers, and defeating its own ends. This point is well made by Tead and Metcalf in "Personnel Administration":

Follow-up of absences involves, however, one of these delicate points of procedure in which almost everything depends on how it is done. A visit by the company representative to the absent worker's home on the second or third day of his non-attendance may be a kindly and considerate act of inquiry and proffer of help, or it may be used in a most objectionable way as an occasion for prying into purely personal affairs The good will of the working class will only be retained in the long run if the visit is made by a kind, tactful, discreet woman nurse whose natural first concern is a solicitude for the health of the absent worker. If the worker is not sick, and if he or his family does not *volunteer* information as to the reasons for the absence, the nurse's work as an agent of the company should be considered finished. If the worker wants to look elsewhere for a job, if he wants to go shopping, if he has earned all he cares to in the week—that is his concern; although he stands of course to receive any consequences of unexcused and unexplained absence which may be embodied in the shop rules.

The attendance bonus has been adopted in some plants as a means of combating absenteeism. Perhaps the most original of plans is in operation in one of the plants reported on by the Rochester Industrial Management Council.⁵ Here the following choices of bonus are offered after one month's perfect record:

1. One day's vacation with pay each month.
2. One extra day's pay every month.
3. Accumulation of vacation time earned to be taken at one time. Thus, a year's perfect record would yield two weeks' vacation with pay.

⁵ Report of Special Committee on Absenteeism and Tardiness, Chamber of Commerce, Rochester, New York, June, 1918.

4. Accumulation of extra money granted yearly, the same in the meantime being on deposit in the local bank.

This plan has not met with unqualified success. The concern thinks that a bonus scheme on a weekly basis would be more beneficial. As it is, if a man is late or absent in the first part of the month, he is indifferent as to his record during the remainder of the month. About fifty per cent of the employees are participating in the plan.

The bonus schemes of four other plants in the same council are tabulated by the special committee appointed to investigate absenteeism:

Plant 2. Each employee after being three months in the service is entitled to participate in the bonus scheme which consists of 5 per cent of the weekly earnings paid every three months in a lump sum. This bonus is contingent upon attendance and punctuality, with justifiable sickness the only basis for excuse. Unexcused absence or lateness affects the bonus for the week in which it occurs. This plan is working out very successfully, 75 per cent of the employees participating. It has had a noticeable effect in stabilizing employees.

Plant 3. Every employee who has had a perfect attendance and punctuality record for three consecutive weeks is entitled to \$1 bonus weekly, but once the record has been broken, another probationary period of three weeks must be passed before he is again eligible for a bonus. This plan is working out very satisfactorily. The first month 38 per cent of the employees participated. The last record shows that 52 per cent shared in the bonus.

Plant 4. This plant has a special scheme for its office staff. Punctuality and attendance alike enter into the bonus for the office employees. A

month's perfect attendance entitles the employee to a day off the next month, or an extra day's pay. Furthermore, for each month's perfect attendance, a half day is added to the annual vacation which is on the basis of one week, and thus becomes two weeks if the year's record has been perfect.

Plant 5. Every employee who turns in a perfect clock card for a week is given a 25-cent bonus which is paid at the end of the month.

Some fundamental objections have been put forward, however, to the use of the bonus as an incentive to attendance.

That such recognition should take the form of an attendance bonus seems to us an unduly artificial and permanently unsatisfactory method of securing something which the management has presumably contracted for—namely, the regular attendance of its workers. It is usually poor policy to give special rewards for fulfilling obligations which it is in the nature of the agreement to fulfill.

This is the opinion of Tead and Metcalf. There is also the danger that employees who are really too ill to work, will be encouraged to stay at their posts rather than lose the promised bonus.

V

Lastly, how far is the management able to remove the causes of absenteeism? There is no question that physical disability including sickness and accidents (some caused industrially, others not) is the most important single cause of absences, and the direction any attempt to remove causes must take must be "via" the health and safety of the employee. In a survey of the factors contributing to the workers' health and safety, it is evident that there are three definite groups of factors controllable by the plant management—physical conditions of the plant, hours

of labor, and medical first-aid service; while two factors are controllable by community action—transportation facilities, and the public health and safety regulations. To be sure, in a small industrial center a large factory is able to exert a great influence over community action as well.

Here again, a constant study of the records must be the basis for control. If, for instance, eye-strain, headache, etc., is repeatedly found to be the cause of absence, then the management must look to its conditions of light and noise. In the investigation reported in Public Health Service Bulletin 106, it was found that bad physical conditions, poor ventilation and air conditions (heat, smoke, fumes, etc.), and particularly great noise increased the absenteeism of the departments affected, above the average absenteeism of the whole plant.

There is no doubt that long hours of work will greatly increase absenteeism. An example of the effect of long hours collected early in the war by the author under the auspices of the British Health of Munition Workers Committee but hitherto not published, is particularly striking. The figures were obtained at a large shipyard and munition factory employing 11,096 workers at the end of 1914 and 14,225 at the end of 1915. At the outbreak of the war the hours had been increased very greatly. Instead of working a 9½-hour day almost exclusively with men, the plant now employed men and women on two shifts, day and night. The men's day shift consisted of 9½ hours full work, and the night shift 11½ hours; both the women's shifts were 10½ hours. Some seven hours were also worked on Sunday.

Before this increase in hours the plant had been accustomed to an absence rate of less than 6 per cent. By September of the same year the rate of

absenteeism in all departments had increased to 7.9 per cent, and in the same month the following year to 11.3 per cent. By December, 1916, the rate had shot up to 12.2 per cent. The average increase in absence during the year in all departments for the months of September, October, November, and December was from 9.3 per cent to 12.2 per cent, almost one-third again.

One of the most frequent causes of tardiness is faulty transportation, and to this also may be ascribed much of the absenteeism for longer periods. Convenient and comfortable transportation to his factory would in many cases be the deciding factor in getting a man to his work on stormy days, or on days when he did not feel quite as vigorous as usual. The prospect of splashing through muddy roads or struggling through deep snows, or of having a long wait for his car in the bitter cold would in all probability induce him to remain at home. If it is evident that transportation is at the bottom of much absenteeism, if the management is unable to secure better service, some attempt might be made to adjust the working hours of employees living in certain zones. This idea has been adopted to some extent at the Ford parent factory where employees in certain departments arrive at intervals of ten or fifteen minutes in order to avoid congestion.

While public health and safety are essentially matters of community concern, the factory still has a large measure of control over the health and well-being of its workers while at the plant. Indirectly also, the factory wields a great influence over the general public health. If wages are so low that workers must be content with a low standard of living, insanitary sewage, overcrowded rooms, bad ventilation, poor and insufficient food, etc.; it follows inevitably that sickness will claim a

large amount of the worker's time. Similarly, the length of hours the employee is compelled to work and the conditions under which he labors have everything to do with his general health. If he is exposed to large accident risk through lack of safety devices, a corresponding amount of time will be lost through accidents.

It seems hardly necessary to point out, therefore, that however vigorously the follow-up system or other remedial measures are practiced, the results will be largely ineffective if concern for the fundamental conditions under which the workers are compelled to work and live, are ignored. Practical first-aid stations where minor injuries can be dressed before there is an opportunity for infection, and factory hospitals where sick employees can be treated and the progress of their disease arrested at once, are vital aids in checking a high absentee rate.

The Norton Company of Worcester, Massachusetts, considered the establishment of its Health and Sanitation Department not as a welfare work, but as an economic proposition. During the first year a careful investigation was made of the time lost by men who used the hospital and who were sick enough to lose time, and those who lost time through sickness or accident and did not use the hospital. At the end of the year it was found that the average *time saved* by each man *losing time* and using the hospital was 19.2 hours per man per month. It must be remembered that this does not represent the time saved by men who used the hospital and were thereby prevented from incurring *any* loss of time; a loss that might have averaged from one to three or four days. Very many such cases occur every week.

Apart from the employee's mere physical health and safety, the personality of the foreman undoubtedly has a pro-

found effect on the conduct of his men and the careful selection of foremen is an extremely important factor in contending with high absenteeism. In tabulating absenteeism by departments, the division into departments—should be fine enough to reach the foreman whose influence is most felt by the workmen. This is different in different shops. In some the department head is in close enough contact with the men so that any difficulty with the "straw-boss" comes immediately to his attention. In other cases the "straw-boss" or working foreman is the man who really determines the status of his subordinates. Whichever it is, we need to know definitely how well men stay under certain personalities.*

VI

What, then, is the minimum uncontrollable rate of absence to be set as a practical ideal? It must be just enough above the zero point of no

Absence by temporary sickness,

(not more than six months)...1.3 to 2% of scheduled hours

Absence (temporary) by

industrial accident.....0.1 to 0.7% " " " (according to industry).

Absence by leave.....0.2%

Total unpreventable ab-

sence1.6% to 2.2% " " "

absenteeism at all to allow for temporary⁷ sickness and accidents which really are unpreventable by the management, and also a certain amount of absence by leave. Figures on which to base such an estimate are extremely limited and incomplete up to the present. On the basis of various sickness surveys the author has calculated, however, that temporary sickness accounts for the loss of between 1.28 and 2 per cent of the scheduled working time, and these limits are more or less constant for all industries. Accidents, on

the other hand, vary greatly according to the industry, and cause an additional 1/10 to 2/3 per cent in the absence rate.

As far as our evidence goes, therefore, we are able to state the percentage of unpreventable absence in terms of scheduled working hours given below.

While much of the accident burden and certain types of sickness could be further reduced by the plant, on the other hand, some milder types of sickness that *should* cause absence do *not* enter into these figures sufficiently. Frequently an employee who is too ill to do effective work will still keep at his post in order not to lose his pay. The full and exact effect of genuine sickness upon absence can be seen only where the full pay is provided, absence or no absence, and where at the same time there is strict supervision against malingering. These two conditions are probably found in the American army,

and the high sickness rates for the army as compared with industry go far towards proving that the industrial sickness rates here quoted are actually an underestimate.

It is probable that the full percentage listed under absence by leave was genuinely unpreventable. Plant managements are usually none too lenient in this matter. Indeed it is a question whether leave even in urgent family matters is not so difficult to obtain that it simply is not applied for. Consider, for instance, an annual vacation which is accepted as a necessity by the well-to-do, and which cannot be less necessary to those who work eight to ten

* E. H. Fish, "Keeping Track of Labor Turnover," Norton Company, Worcester, Mass.

⁷ Disability for more than six months would involve a case of turnover.

hours a day in the same surroundings, week in and week out! But what plant would consider as a legitimate plea for absence a vacation of a week or two?

To sum up; a more accurate estimate of the genuinely unpreventable minimum of absence would probably decrease the percentage given for accident, and increase the percentage for leave. In the case of sickness the rates would tend to approximate the rates found under sick benefit schemes, where the sick pay drawn is not so much as regular wages, but yet sufficient to prevent the wage-earner from becoming destitute. Where preventive measures are instituted as well as insurance, some fall in the sick rate may certainly be expected.

If the rate of absenteeism is reduced to 3 per cent, the personnel or employment department of a plant ought to feel fairly satisfied. It is true that some plants by the introduction of extremely efficient methods have reduced the absentee rate slightly below this figure; but in most cases it is

likely that an attempt to reduce absenteeism below 3 per cent would prove more expensive than would be justified by the results.

When sickness and accidents, leave of absence, latent turnover and strikes are all eliminated, there will yet remain in most plants a residuum of absence unaccounted for. The greater part of this will probably be due to a natural reaction of the employee to the modern industrial system. He has become indifferent. He does not find his work interesting enough or his pay large enough to attract him to the plant day after day. He is bored with his job and wants a change and is probably suffering as well from a definite physiological fatigue. He needs rest and recreation to rekindle interest in his work.

If a company determines upon a policy of strict attendance, it must be prepared also to adopt a liberal policy as to holidays and vacations, for the one is humanely impossible without the other.

BUDGETARY CONTROL OF PLANT AND EQUIPMENT

BY JAMES O. MCKINSEY*

MANUFACTURING firms usually employ a large amount of equipment, and, in most cases, own the plant in which they operate and in which consequently a large part of their capital is invested. It can be seen, therefore, that expenditures for plant and equipment are most important in connection with industrial concerns, though of some significance in the case of all businesses. The following discussion will be devoted primarily to a consideration of the control of expenditures for the plant and equipment of a manufacturing business, but the same principles apply to any other type of business.

Expenditures in connection with plant and equipment may be classified as follows:

1. Expenditures necessary to maintain the present plant and equipment at its normal efficiency. No matter how carefully equipment is selected or how carefully it is used, certain expenditures must be made from time to time to keep it in such condition that it can be operated efficiently. Such expenditures are called *repairs*.

2. Expenditures made to replace with new equipment old equipment that is worn out and discarded. Regardless of the amount spent in the way of repairs, equipment will in time be in such a condition that it can no longer be operated profitably. It is necessary to purchase new equipment to take its place. Such expenditures are termed *replacements*.

3. Expenditures in connection with present equipment which add to its life or efficiency. For instance, a machine may be entirely overhauled, and old and worn parts replaced by new ones with the result that it will continue in use longer than was

originally estimated. Or a new patent feature added to a machine may not increase its life, but increase its efficiency. Such expenditures are termed *betterments*.

4. Expenditures for new equipment in addition to that employed by the business. As a business expands, it is necessary to secure additional equipment to carry on the increased volume of business. Expenditures for this purpose are termed *additions*.

To maintain an effective control over expenditures for plant and equipment, two things are necessary:

1. A proper analysis must be made of the expenditures to determine their classification, and a record must be kept to show correctly their effect on the financial condition of the business.

2. A proper control must be exercised over the *amount* of the expenditures sufficient to provide a well-equipped and efficient plant, and, at the same time, prevent the expenditure of more than is necessary to secure this result.

This discussion will be devoted primarily to a consideration of the method of controlling the amount of plant and equipment expenditures. As adequate records are the basis of any such control, brief consideration will also be given to the treatment of these items in the accounting records and reports.

From the viewpoint of both accounting and financial management, the classes of expenditures explained in the foregoing discussion are distinctly different and should be recorded to show properly their effect on both financial condition and operating efficiency. Repairs are usually considered as a current expense to be provided for out of the income of the fiscal period in which they occur. In opposition to

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this theory it is sometimes urged that repairs are not necessarily the result of current operations. In other words, a machine may be so worn that it is almost ready to break at the end of one period, but the break with the consequent repair may not actually occur until the beginning of the next period. The customary practice assumes, however, that repairs "even up" from period to period, since each period incurs repairs caused in part by the operations of previous periods, and, in turn, it transfers "potential repairs" to the next period. Consequently, it is argued that their cost will tend to be approximately uniform from period to period. If, for any reason, the cost of repairs fluctuates, and it is desired to distribute their cost evenly, this may be accomplished by estimating the average cost of repairs on the basis of past experience and future plans and setting up a Reserve for Repairs. Under this method there will be charged to expense and credited to a Reserve for Repairs at the end of each period an amount equal to the estimated average cost of repairs. As the repairs take place, they are charged to the Reserve for Repairs. Since the credit to the reserve account is not made until the end of the fiscal period, and the repairs are charged to it during the period, the account may show a debit balance during the period, but this balance will be adjusted by the credit entry before the financial statements are compiled.

II

The cost of replacements is not an expense of the period in which the replacement takes place, but of all the periods during which the equipment which is replaced has been used. If a machine costing \$1000 is purchased in 1914, and is discarded and replaced by another machine costing the same

amount in 1920, each of the six years during which the machine has been used has benefited from its use, and, consequently, each of the six years should be charged with a part of its cost. If the scrap value of the machine is \$100, the six years must be charged with \$900 for its use. Since the actual expenditures for any particular equipment take place at one time, and not during each year of its use, it is customary to credit the estimated depreciation to a Reserve for Depreciation account and to debit an expense account for the same amount. When the asset is sold or discarded, it is charged against the reserve account. By this means, the cost of equipment is charged against the income of the periods which benefit from its use.

When betterments are made, future periods will be benefited either through the increased efficiency of the equipment concerned, or through its longer life, and hence the postponement of replacement costs. In any case, since future periods are to receive the benefit of such betterments, these periods should bear their cost. Hence betterments are charged to asset accounts, and are not reflected in the expense accounts of the period in which they are incurred.

As additions, like betterments, are expected to benefit future periods, their cost is not charged to the period in which they are obtained, but is distributed over the periods during which they are used, by means of the periodical depreciation charge. Consequently additions are a capital, and not a revenue, charge.

From the foregoing discussion it can be seen that expenditures in connection with plant and equipment may be divided into two main groups:

1. Those which are made to *maintain* the present equipment. Repairs and replacements are included in this group.

Such expenditures may be termed maintenance costs. They must be included in the periodical expense accounts. Many authorities do not include replacements as an item of maintenance cost. From the viewpoint of the preparation of a maintenance budget, this inclusion is desirable and no difficulty arises if the definition of maintenance precedes its use.

2. Those which represent an *addition* to the assets of the business. Betterments and additions are included in this group. Such expenditures are termed plant and equipment costs. They are charged to the asset account.

The preceding discussion has dealt with the method of recording these two classes of expenditures. The following discussion will deal primarily with the method of exercising control over their amount.

III

In most systems of cost accounting, maintenance costs are included as a part of the manufacturing expenses. From the viewpoint of cost accounting, this may lead to no difficulty, although, when more accurate costs are desired, it is necessary to allocate maintenance costs on a different basis from other manufacturing expenses. This requires that they be recorded separately though this does not in any way imply that they should not be treated as an item of the cost of production. In the preparation of estimates to serve as a basis of budgetary control, maintenance costs should be treated separately from other manufacturing expenses since they bear a different ratio to the volume of production than do the other expenses. It is essential that all such expenditures be classified in such a manner that their ratio to the volume of the operations in connection with which they are incurred can be determined. To do this may require a different classification of expenses than that maintained for purposes of ac-

counting. The separation of maintenance costs from general manufacturing expenses is an illustration of the application of this principle which, however, should not be applied slavishly. There are cases in which it is better not to attempt the separate budgeting of maintenance costs. In a business where the volume of production may vary little with a consequent slight variation in manufacturing expenses, sufficiently accurate estimates may be made by following the accounting classification for these expenses.

To exercise effective control over disbursements for plant and equipment, three things are necessary:

1. Data must be available to show results of past operations and serve as the basis of future plans.

2. After all the available data has been considered, the plans which have been formulated must be expressed in workable form by means of a budget on plant and equipment. Sometimes two budgets are made, one on maintenance costs and one on the cost of betterments and additions. The requirements for each are sufficiently similar to make their joint discussion possible.

3. After the budget is made, it is necessary to have records and reports prepared which will make possible the control of such expenditures and the enforcement of the budget plans.

The data required to serve as a basis for the control of plant and equipment expenditures may be obtained from the four following sources:

1. The accounting and statistical records with reference to past experience.

2. Calculations based on predetermined factors.

3. The consideration of future plans.

4. The investigation and study of experts.

To control expenditures for plant and equipment, it is necessary to make first, a proper classification of the plant and equipment and secondly, an ac-

curate estimate of plant and equipment expenditures. In a manufacturing business, for instance, plant and equipment expenditures will vary with the production program. If the production program is to be increased, it will be necessary to do one or both of two things: (1) Secure additional equipment; (2) Use present equipment more intensively. In either case, additional expenditures will be incurred and the amount of these expenditures must be estimated in drawing up the plant and equipment budget. If additional equipment is to be secured, it will be necessary to determine the units of equipment used in the past and the amount of their production capacity. On this basis, the additional equipment required to secure the increased production capacity can be estimated. For past production capacity to be obtained accurately, a record of each unit of equipment is necessary.

If the present equipment is to be used more intensively, this will increase the maintenance cost, and an estimate of this increase must be made. It should be obvious that a change in the production program may not affect all the equipment of the business to the same extent. For instance, it may be planned to increase the output of only one department, and, if the previous maintenance expense of this department is shown separately from that of other departments, a more accurate estimate of the increase can be made. It will be necessary, however, to know more than the total cost of the maintenance of the department. The new program will probably affect some units of equipment in the department more than it will others. It is desirable, therefore, to have records which will show each unit of equipment in the department, and the maintenance expense incurred on it. This is accomplished by keeping a plant ledger.

IV

A plant ledger is a record which contains an account with each unit of plant and equipment. It serves as a subsidiary record to the controlling account or accounts with plant and equipment kept on the main ledger. The plant ledger is usually kept on cards or loose-leaf sheets, each card or sheet providing a record of one unit of equipment. The size of this unit will depend on conditions. There may be a separate account for each machine, or, if several machines of the same pattern and size are purchased at the same time, they may all be recorded in one account. Each account in the plant ledger, however, should show at least four things:

1. The original cost of equipment and the date of purchase.
2. The amount of depreciation accrued on the equipment to date.
3. The amount of repairs made on it to date.
4. Its present book value.

The repairs entered on the plant ledger account do not affect the value of the equipment since they are treated as an expense and are never added to the asset. It is, however, useful to have them entered on the plant ledger account for memorandum purposes so that in making future estimates, it is possible to obtain information of the past cost of repairs, not only in total, but also by departments and by units. It is not within the province of this discussion to treat of the accounting features involved in the operation of a plant ledger, but it is necessary to emphasize its usefulness in making plans for the control of maintenance cost.

Later articles will show that the various departmental estimates on which a budget program is based are combined for two purposes:

1. To determine the estimated cash receipts and disbursements and thereby formulate a financial budget.

2. To determine the estimated revenues and expenses and thereby formulate an estimated statement of profit and loss.

In making up the departmental estimates, it should be kept in mind that every business desires to formulate a program which it is capable of financing and which will result in the greatest possible profit. A financial budget and the estimated statement of profit and loss are the statements which answer the two questions of most significance in the budgetary program. And all departmental estimates must be made so that these two statements can be prepared. In the preparation of the estimated statement of profit and loss the periodical depreciation charge is an important factor. Consequently it must be given careful consideration in the preparation of the plant and equipment budget.

As equipment wears out its replacement must be provided for. This provision is accomplished by charging a certain amount to the expenses of each budget period and crediting a like amount to a reserve for depreciation. The accounting technique involved in the operation of a reserve account need not be dealt with here. It is sufficient at this time to note that the amount of such depreciation is an important element of the expense of operations and must be included in the plant and equipment budget. In the calculation of the depreciation charge, three things are considered: the original cost of the asset, its anticipated life, and its estimated scrap value. By subtracting the scrap value of the asset from its original cost, it is possible to determine the cost of the use of the asset during its period of life. This cost is usually distributed over the period of its life in such a way that each budget period is charged with

its equitable share. There is, however, a difference of opinion as to how this cost should be distributed. Some contend that each budget period should be charged an equal amount, while others contend that the earlier period should be charged more than the later periods, since the equipment is more efficient when it is new and the cost of repairs is less. Other methods are also suggested, but it is not thought advisable to discuss them here.

Whatever the method of determining the periodical charge, after it has been adopted, it should be followed throughout the life of the equipment. Consequently its determination is merely a mathematical calculation. If it is decided to charge each period a uniform amount, it is only necessary to take the figures of past periods as a basis of the current budget charge. If some other method is followed, the charge for the current period may be more or less than that of the previous period, but it will be a uniform increase or decrease and can be determined by a consideration of the predetermined factors previously mentioned.

V

After the maintenance costs of past periods, as shown by the accounting and statistical records, have been obtained, it is necessary to determine the effect of future plans on these costs. If, for instance, a large increase in production is planned, the increased cost of maintenance arising from this increased production must be estimated. If new methods of manufacture are to be employed, the consequent change in maintenance cost must be calculated. If new equipment is to take the place of old, the maintenance cost will be affected. If it is planned to keep the equipment in better repair so as to make it more efficient and to pro-

long its life, this change must be considered. These, as well as other factors, affect the cost of maintenance and all must be considered.

In considering the relation of maintenance cost to future plans, various comparisons should be made. Some items of maintenance cost will vary in proportion to production volume. To estimate these, it is necessary to determine the ratio of the volume of production to these costs during the period. By applying this ratio to the estimated volume of production for the current period, an estimate for the period can be obtained. Some items of maintenance cost will vary more nearly with the floor space used than with the production volume. Therefore, the ratio of floor space used in the past period to these items of maintenance expense during the same periods will be obtained, and this ratio applied to the estimated floor space of the current period. Other items of maintenance costs may vary in proportion to the number of units of equipment used and their amount will be correspondingly increased.

In the same manner that the general plans of the business, as reflected in the departmental estimates, affect the cost of maintenance, they determine the amount of new equipment to be purchased. In a manufacturing business, the amount of equipment required is determined primarily by the volume of production. If records are available which show machine capacity, it is not difficult to estimate the requirements of the increased production in terms of number of machines or units of equipment. If proper records are maintained, it is possible to estimate the total requirements of the production program and the total production capacity of the factory. By a comparison, the excess of requirements over capacity can be determined, and, from

this, the new equipment required can be calculated.

It is desirable that a periodical check be made on the accuracy of the value of the plant and equipment as shown by the records. If a plant ledger is maintained in the form described in the preceding discussion, it is possible to obtain the original cost, the accrued depreciation and the repairs incurred on each unit of plant and equipment. The depreciation shown as accrued is only an estimate, however, and the expenses incurred may be more or less than those required to maintain the equipment in an efficient condition. Unless some steps are taken to determine the accuracy of the estimated depreciation and the sufficiency of the repairs made, it may be found in the future that both the depreciation and the repairs have been inadequate, and, consequently, there will be an unduly heavy charge against the earnings of future years. To avoid this, it is desirable that a periodical inventory or appraisal be made of plant and equipment and used as a means of checking the plant ledger and as a basis for budgetary plans. By this means inaccuracies in depreciation estimates and inadequate repairs can be discovered and corrected. It is also possible that too liberal depreciation may be allowed or too extensive repairs made, and such appraisals will disclose this fact. Such appraisals will also show when it is better to purchase a new machine, rather than repair an old one.

Although an appraisal of plant and equipment is valuable when used in the way indicated in the preceding paragraph, it must be used with discretion, especially if it is made by professional appraisers. The viewpoint of the professional appraiser is not always that of the accountant or that of the financial executive. The appraiser is trying to appraise present

value and is concerned with original cost and past use only as they assist him in determining present value. As a consequence, market fluctuations are apt to be reflected in his appraisal. The accountant and financial executive, on the other hand, are not interested in the market value of equipment. They are interested only in apportioning the original cost and the cost of repairs over the periods which will benefit from its use in as equitable a manner as possible. An increase in the market value of the asset does not increase its life or its efficiency; neither does a decrease in its market value decrease its life or its efficiency. Consequently the value of the appraiser may not agree with the book value, and yet the book record may be satisfactory. The chief importance of the appraisal is not the value which it places on the asset, but rather the appraiser's estimate of the length of life and efficiency of the asset as reflected in the value placed on it.

Many manufacturing companies have on their staffs a plant engineer, who is responsible for the production, use, and maintenance of plant and equipment. As indicative of the function of the plant engineer, he should usually be responsible for:

1. The study of improved methods of factory construction.
2. The study of present factory layouts and presentation for the approval of the executive in charge of production of proposals for improvements based on costs involved and savings made.
3. The study of machinery, equipment, and tools, and the presentation for the approval of the executive in charge of production of proposals for changes based on costs involved and savings to be made.
4. The preparation of a periodical plant and equipment program based on studies made in collaboration with the works planning department and the works engineering department.

5. The presentation of the plant and equipment program to the executive in charge of production for approval and transmission to the central executive committee of the company.

6. The preparation of a periodical maintenance program as proposed by the works maintenance departments and detailed by the works engineering departments.

7. The presentation of the maintenance program to the executive in charge of production for approval and transmission to the central executive committee of the company.

8. The supervision over the execution of the plant and equipment, and the maintenance programs as approved by the central executive committee of the company.

Where an efficient plant engineer performs the functions suggested in the above outline, the services of professional appraisers can usually be dispensed with under normal conditions.

VI

The preceding discussion has explained in considerable detail the data which serves as a basis for the preparation of the plant and equipment budget. It is now necessary to see how this data is formulated into a budgetary program as a means of controlling plant and equipment expenditures. This involves a consideration of (a) the contents of the plant and equipment budget; (b) the responsibility for its preparation; (c) the form in which made; and (d) manner in which used.

The plant and equipment budget should state the following: (1) the anticipated repairs and estimated depreciation on the present plant and equipment; (2) the estimated cost of new equipment which should show: (a) cost of factory equipment, and (b) cost of equipment for administrative and selling units of the business; (3) anticipated repairs and estimated depreciation on new equipment.

to state that accurate estimates of plant and equipment costs are facilitated by the use of standardized equipment. Such standardization is especially desirable for furniture, fixtures, and office equipment. To that end businesses frequently select a standard type of desk, standard typewriters, and standard calculating machines to be used in all offices. Any other type of equipment which is in general use should be standardized if possible. Factory equipment should also be standardized, if practicable. The several advantages of using standardized equipment may be enumerated as follows:

1. By buying all equipment from one company, it may be possible to obtain more favorable terms. Also this method prevents the purchasing of unduly expensive equipment by some departments when less expensive equipment would do as well.

2. Standardization facilitates the purchasing of new equipment, since a requisition can be made for one unit of equipment and sent to the general purchasing agent who knows what to purchase, from whom to purchase, and its cost. This eliminates the preparation of specifications for the use of the purchasing agent and relieves him of the task of obtaining quotations on special types of equipment.

3. Standardization facilitates the production of any equipment which a concern is able to manufacture for its use since standard specifications can be prepared and the necessary materials and tools can be procured in advance. It also facilitates the making of repairs since piece parts can be kept on hand, and mechanics will become more skilled in making repairs.

4. Standardization facilitates future planning for it is only necessary to estimate the number of units required and the cost can be easily obtained.

5. Standardization tends to promote the most economical use of equipment, since equipment can be moved from one office or one department to another, thus preventing a probable surplus in one, while there is a shortage in another.

6. The standardization of equipment which requires technical skill to operate, facilitates the transfer of employees from one department to another.

Column 6 on the plant and equipment budget states when the new equipment is desired. With this as a basis, the purchasing agent will state the terms on which the equipment will be purchased and show the date of payment. This information is necessary for the preparation of the financial budget. If the equipment is to be produced by the company, an estimate must be made of the disbursements necessary for its production. The date given in column 6 is the date when the completed equipment is desired. It may require a considerable period of time for its production. During the process of its construction, expenditures for labor and possibly for materials will need to be made. Under such circumstances the estimated expenditures preceding the completion of the equipment must be determined and allocated to the proper period for the purpose of the financial budget.

VII

The budget for plant and equipment consists of an estimate of the expenditures necessary for maintaining the present equipment and the securing and maintenance of the additional equipment demanded by the budget program. After such a budget has been prepared it must be approved by executive authority. In some cases, it is submitted to the board of directors, in other cases the board of directors may delegate the duty of approving it to the president, while in other cases, it is passed upon by a central committee composed of the principal executives of the company.

Its approval consists in the making of various appropriations for the

necessary amount to cover the cost of the various items included therein. After these appropriations are made, it is customary to delegate to some official of the company the authority to grant expenditures under each appropriation. That this executive may exercise effective control over such disbursements, it is necessary that they be made only on requisition or request. When repairs or additions to plant or equipment are desired by any department, the head of this department should submit a requisition to the executive to whom the responsibility for exercising such control over disbursements has been delegated. Such requests should be accompanied by an estimate of the cost of the repairs or additions. If equipment is to be purchased from outside vendors, it is easy to obtain the purchase cost and submit it with the requisition. If additions to plant or equipment are to be constructed by the company, an estimate of the cost of the construction must be made.

The estimate of the cost of repairs or construction can be made in two ways. If the business maintains an engineering department, this department can be asked to make the estimate. A competent engineer learns by experience to estimate costs accurately. His estimates should be checked by statistics of past costs. If it is not possible or not desirable to have engineers make the estimate, it can be made by the cost accounting department on the basis of the statistics obtained from the records showing previous costs. If co-operation between the accounting department and the engineering department is secured, more accurate estimates will be obtained.

If the requisition calls for the construction of equipment by the factory, careful records should be kept of the cost of the construction. The method

of determining these costs is very similar to the method of determining the cost of goods manufactured for sale. Each requisition, after it has been approved, is given a number, and a construction order is issued authorizing the job. The construction order has the same number as the requisition. An account is opened on the cost records, and all costs incurred in the construction are charged to this account. When the construction order is completed, a report is made to the executive who supervises the expenditures for construction showing the estimated cost and the actual cost. If there is any considerable variance, it is due to inaccurate estimates or an excessive cost.

With the comparative figures available, it is possible to determine the cause of the variation. Unless such comparisons are made, it is impossible to exercise any effective control over the cost of construction work. It may not be out of place to urge that every attempt should be made to obtain accurate costs in connection with construction and repair orders. Unless such costs are accurate, it is impossible to judge the efficiency with which the work is done or to estimate accurately the cost of future work.

In arriving at the costs of construction it must be remembered that a business cannot derive a profit from work done for itself. Hence no profit must be allowed on construction work performed by the company for itself. It may be possible that the company performs this work for less than it can secure it from outsiders. This results in a *saving* to the company, but it does not result in a *profit*.

It is usually not possible to estimate exactly each item of plant and equipment cost which must be met during the budget period. Such expenditures cannot always be foreseen. It is desirable to anticipate these additional

each class of expenditures and the actual amount expended. A report should be made monthly giving this comparison as shown in Exhibit II.

VIII

The above report is of service not only to the executive who has control of the purchases and construction of plant and equipment, but also to the

[illegible]

EXHIBIT II

financial executive. The report shows the former the amount available for future purchases or construction, and it shows the latter the amount which he must plan to finance. The tenth column gives the treasurer information of especial value since it states the payments to be made in the near future. Column 13 shows the amount which may be diverted to some other purpose in case of financial stringency. If the executive committee receives this report each month, it can exercise an effective control over all disbursements.

To exercise effective control over the plant and equipment budget, it is necessary to have periodical reports which will make possible a comparison between the amount appropriated for

In the preceding pages, the procedure necessary for the preparation and execution of the plant and equipment budget has been outlined. In summary¹ form, this procedure is as follows:

I. Requirements for Control of Plant and Equipment

1. A proper analysis of plant and equipment expenditures to determine their classification and a record of them which will show correctly their effect on the financial condition of the business.
2. A proper control of the amount expended for plant and equipment to the end that sufficient will be expended to provide a well-equipped and efficient plant, and, at the same time, prevent the expenditure of more than is necessary to secure this result.

II. Control of the Amount of Expenditures Requires

1. That data be available which will show results of past operations and serve as the basis of future plans.
2. That plans be formulated on the basis of this data and be expressed in workable form by means of a plant and equipment budget.
3. That records be maintained and reports made which make possible the enforcement of the budget formulated.

¹ In this brief summary no attempt is made to indicate the organization necessary for plant and equipment control, but this is discussed fully in the preceding pages.

III. Data Required as Basis of Control

1. That which is obtained from the accounting and statistical records with reference to past experience.
2. That which is obtained by mathematical calculations based on predetermined factors.
3. That which is determined by a consideration of future plans.
4. That which is obtained as a result of the investigation and study of experts.

IV. Plant and Equipment Budget Shows

1. The anticipated repairs and estimated depreciation on the present plant and equipment.
2. The estimated cost of new equipment including (a) Cost of factory equipment, and (b) Cost of equipment for administrative and selling units.
3. The anticipated repairs and estimated depreciation on the new equipment to be secured.

V. Records and Reports for Control of Plant and Equipment Budget Include

1. Requisitions for all purchases of equipment and for all construction of equipment or repairs.
2. Estimates of cost of purchases or construction which accompany the requisitions.
3. Records of the cost of all construction or repair work performed by the company.
4. Reports showing a comparison of estimates and costs.
5. Reports showing a comparison of expenditures with budget allotments.

WHY A SALES TAX?

B. S. ORCUTT*

THERE is a great deal of underbrush to be cleared away before the outlines of a sound and sane overturn sales tax can be clearly discerned. The advocates of a sales tax do not, unfortunately, all talk the same language, and the opponents of any uniform overturn tax joyfully jumble all the divergent views advanced into a straw-man of their own conception and then proceed to try to set it on fire. But it won't burn. Part of it is non-inflammable. This non-inflammable material in the straw-man is the suggestion for a tax at each step in the sale of commodities by any one to any one.

By commodities I mean just what the dictionary says—"goods, wares, merchandise, produce of land, and manufactures."

By a tax at each step in the sale of commodities, I do not mean a tax on the gross receipts of everybody engaged in any activity. I mean a tax so levied that the vendor of commodities shall become the collector of a tax measured by the price agreed upon with the purchaser, and compulsorily passed on to the purchaser by means of a special charge, as a tax, specifically billed as such, on the invoice to the purchaser.

To approach the situation right in the middle, I mean that if John Smith is a manufacturer of overalls, he must buy his cloth, his thread, his buttons, his buckles, his drill, from various people who manufacture these things. He buys 1,000 yards of denim from John Doe at 30 cents a yard. The bill is \$300, plus, at 1 per cent, \$3 tax collected from Smith by Doe and turned

over to the government by Doe. He buys 10 gross of buttons from John Jones for \$8. The bill is \$8 plus \$.08 tax. He buys from John White a gross of buckles for \$2. The bill is \$2 plus \$.02 tax. He buys from John Green x spools of pocket drill for \$15. The bill is \$15 plus \$.15 tax. He buys from John Brown x spools of thread for \$7. The bill is \$7 plus \$.07 tax.

The total cost of material for a gross of overalls is then \$335.32, of which \$332 is the invoiced cost of material and \$3.32 is the invoiced tax collected by the vendors of cloth, thread, buttons, buckles and drill, and turned over to the government.

John Smith goes about his business of manufacture in the confidence that he bought this material at the best possible price and that every competitor has paid the same tax rate on material. Smith sells his gross of overalls for \$864, or \$6 each. He bills the overalls to the retailer at \$864 plus \$8.64, or a total of \$872.64, of which Smith acts as government collector of \$8.64.

The tax on Smith has been \$3.32, if there was any tax at all. It has been a consumption tax pure and simple, measured by the amount of his purchases, not of his sales. Every competitor has been obliged to pay approximately the same tax, varied slightly by his skill or luck in buying. The tax has gone into the cost of goods, just as has labor, freight, and overhead. Smith and his competitors have each been obliged to make their sales prices irrespective of their obligations to collect a tax, and what they do collect goes to the government and is not a percentage paid by them on their gross receipts.

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Before the materials got to Smith a similar tax was paid on previous processes, and was all included in the \$3.32 that Smith paid. When the manufactured product leaves Smith, the retailer pays the tax of \$8.64, or \$.06 on each garment. When the retailer sells to the poor, downtrodden laboring man at \$8 a garment, the tax becomes \$.08. It doesn't interest me particularly whether the retailer collects the \$.08 tax from the eventual consumer or absorbs it himself. My object is to make it a consumption tax all the way down to the retailer, and to consider it nothing but a consumption tax.

II

The words "consumption tax" sound fearsome to the politician, who still talks glibly about the tariff. The tariff tax is a consumption tax pure and simple when applied to articles not produced in this country. It is, like the excess profits tax, a consumption tax plus, when applied to articles that are produced in this country. All the present miscellaneous sales taxes are consumption taxes. I tried to explain to a correspondent that a tariff tax of 10 cents a pound on coffee was a consumption tax. He dismissed my illustration with the, to him sufficient, answer that "the tax on coffee is a tariff matter". Then he added: "Whether your importer enters the amount of the tariff on his bill as a separate item or includes it in his gross price, is a matter of absolutely no consequence. He will get all the market will stand for his coffee in either case."

Precisely; that is exactly what I am trying to get at. He would do the same thing were there no tax, and so would his competitor. The element of competition and price is not influenced by the tax. So with a uniform overturn tax, invoiced as such!

There "ain't no such animal" as a tax that nobody pays. A proper consumption tax is a tax that is passed on to the final consumer just exactly as it is levied, not augmented many times like the excess profits tax, and not absorbed by business like the imaginary tax that sends shivers down the spines of unduly alarmed middlemen.

Now all this is different from a retail sales tax like the present tax on jewelry, or luxuries, or ice-cream. It is different from a tax on gross receipts that may be absorbed or pyramided at the option of the dealer. It is different from a tax on services, or on the transfer of capital assets. It does not conflict with the long established special excise taxes on tobacco and spirits, with the stamp taxes on documents, or with the income tax.

A tax on overturn sales of commodities cannot be a direct substitute for the excess profits tax. The two taxes are not comparable except in the one feature of being an ultimate cost to the consumer, for of course without profits derived from the consumer, there is no excess profits tax. Abolition of the excess profits tax involves readjustment of surtaxes and of corporate normal tax to bring about equality between stockholders and non-stockholders. This is a problem by itself that would be just as much a problem were there no other tax than the income tax.

Conversely, the clash between special consumption taxes and a general consumption tax would still exist were there no income tax and were all revenues derived from consumption taxes.

As a matter of fact, practical considerations make necessary not only an income tax and a consumption tax, but also certain privilege taxes, which again are in a class by themselves. The problem with respect to classes of taxation is to make them balance properly.

Hence we can discuss the principle of the consumption tax without regard to other classes of taxes.

The issue with respect to an over-turn sales tax on commodities is an issue between one, general, uniform tax and many special, irregular, unrelated, confusing, and annoying taxes.

There are now special consumption taxes on some 100 different articles, laid at different rates and collected by various methods. The resulting confusion is endless, the leakage is unknown, and in many cases the revenue derived is negligible and the cost of collection excessive. Some of these taxes are levied on the producer and some on the consumer.

In the latter (the consumer) class, the vendor acts merely as a collector for the government, and equality is therefore assured as between consumers of the particular articles taxed. Examples of this tax are the 10 per cent collected from purchasers of theater tickets, the 4 per cent collected on perfumes, cosmetics, patent medicines, etc., the 10 per cent collected on certain alleged luxuries, the 10 per cent collected on ice-cream, etc.

In the former (the manufacturer) class, the vendor pays the tax. There is equality between vendors in so far as each must pay a tax, but there is nothing to show whether the tax has been passed on or absorbed, whether it has been augmented or diminished. Examples of this class are the 5 per cent levied on sales of automobiles, 10 per cent on sporting goods, 3 per cent on chewing gum, 100 per cent on brass knuckles, 5 per cent on jewelry.

III

In neither class is there any rhyme, reason, co-ordination or guiding principle in the selection of the articles taxed or in the rate exacted. Admittedly,

the entire scheme was an emergency recourse, and is illogical, unfair, absurd, and administratively chaotic as a permanent basis of taxation. But a little study of the practical application of these taxes brings to light certain principles that might and should be applied to all consumption taxes.

In practice, the dispenser of an ice-cream soda sets a price of say fifteen cents for the article, and then collects the tax of two cents from the consumer. All consumers pay that two cents. It does not enter into the overhead or the expense of conducting the business. It is a tax that "runs with the goods." The element of competition between dispensers is eliminated so far as the tax is concerned. One dealer may use a larger glass than his competitor, or he may use a more expensive syrup, or he may charge 13 cents instead of 15 cents for his concoction, but the tax remains constant at the rate established by law. It is paid without relation to his income. The competition between himself and his neighbor remains just as it would be were there no tax. It is questionable how much of this tax gets to the government. The Treasury Department doesn't know. But the consumer never fails to pay.

In practice the automobile manufacturer makes a price for his car f. o. b. at the factory. To that price he adds 5 per cent as the tax which he then actually collects from the purchaser, although in this case the law levies the tax on himself. He adopts this procedure because it brings about simplicity and equality in the computation and collection of the tax, just as if the tax had been levied on the purchaser, as was the case with the ice-cream soda. He adjusts his price in competition with his rivals. The existence of the tax makes no difference to him as compared with his competitors who adopt the same practice.

However, all the manufacturers' taxes do not work thus simply. The manufacturer of basket-ball shoes is taxed 10 per cent if he calls them basket-ball shoes, but there is no tax if he calls them "sneakers." The manufacturer of a hunting knife is taxed 10 per cent if he calls it a hunting knife. He is not taxed at all if he calls it a sheath knife. The manufacturer of a billiard table is taxed 10 per cent, but there is no tax on a mantelpiece made alongside out of the same materials. These people cannot easily segregate the tax, and it ordinarily goes into general cost to be passed on or absorbed or guessed at. Then it immediately becomes a percentage on gross income.

The manufacturer of toilet soaps is taxed 3 per cent and the manufacturer of candy 5 per cent, on sales price. Neither can apportion this to individual sales so it goes into cost and becomes a percentage on gross income.

It is right here that the objection most seriously urged against an overturn tax comes into play. Unless the sales tax is definitely passed on to the consumer it becomes a tax on gross income and is open to the criticism that it is unequal as applied to net income. It should always be passed on to the consumer. Hence all the arguments based on the idea of relation to net income are waste motion so far as the dealer is concerned.

An overturn sales tax should be distinctly confined to commodities—that is, to goods, wares, and merchandise—and it should be frankly a consumption tax like the tax on ice-cream, theater tickets, and the so-called selected luxuries. It should always "follow the goods" by specific invoice. It could never then be inflated or have any effect on competition any more than if it never existed.

Assume that all these irrationally unrelated, irregular, pestiferous, speci-

ally-selected excise taxes were wiped out, and a general tax, of say 1 per cent were levied on all overturns from the producer to the consumer, with the special and distinct proviso that the tax is in addition to the sale price and is to be so invoiced on the bill. How can such a general tax have any influence on competition or be inflated to consumers or work any injustice as between one producer and another or as between one consumer and another?

The Philippine overturn tax is so administered, the purchaser paying for the stamps which are merely the machinery of collection, not by any means necessary. The French tax, the Canadian tax and the Mexican tax are so administered. All are perfectly simple and satisfactory.

With compulsory invoicing of the tax, all the labored arguments as to percentage charge against net income fall to the ground and the carefully worked out tables to prove an imaginary point become a joke.

IV

Nobody has the effrontery at any place or any time to say that there should be no sales taxes. The opponents of a general commodities overturn tax not only admit the necessity of a sales tax in some form, but they urge additions to the present long list of special sales taxes. In the same breath they gasp with horror at the idea of a consumption tax; they nearly strangle over the thought that the consumption tax is not a consumption tax at all but a tax on capital; they see endless confusion in arriving at gross receipts, and extreme simplicity in arriving at net income, although net income can be derived only from gross receipts.

The very first line on the working schedule of every income tax blank—corporate, partnership, individual, fidu-

ciary—calls for a statement of gross sales. The entire return from any mercantile or manufacturing operation is built up on that line. If the result set forth in that line is wrong, the whole complicated structure that follows must be wrong. All that is necessary for the collection of an overturn sales tax is that one line.

There is no suggestion anywhere to abolish the income tax. The income tax cannot be collected without that one line on the return. How a dealer can so confuse his books as to make that line false for the overturn tax and fool-proof for the income tax is entirely beyond my imagination. The somewhat notorious report made by the Industrial Conference Board Tax Committee declares that under a sales tax "new and complicated problems would arise in the definition of what is a sale." I have always been a dazed admirer of the dialectic sophistries with which that Industrial Conference Board Tax Committee asphyxiated itself so much to its own satisfaction. I think this particular gem of auto-intoxication is worthy of unstinted admiration. I take off my hat to the accountant who can work out net income from one report of gross sales and can camouflage those same sales for purposes of a sales tax.

It is unfortunate that advocates of a sales tax have allowed themselves at times to display peevishness. This does not blind me—a theorist only—to the equal injustice of the charge that advocates of an overturn tax are those "whose knowledge of taxation is limited and who are concerned solely in selfish attempt to pass their burden on to others less able to pay." It does not justify Congressman Frear's accusations that because Otto H. Kahn "wobbled and wavered" over the subject of an overturn tax, his final decision in its favor was influenced by selfish motives.

All of these backbitings are unworthy in a discussion of a big, elemental, vital question that concerns the welfare of every resident of the United States, and therefore of the United States itself. Why not get down to brass tacks?

To get back, therefore, to the same brass tacks, if a druggist can compete with a fellow druggist in the sale of Pluto water at 40 cents a bottle while compelling me to pay for a two-cent stamp as a tax, there is no reason why every dealer in every article of commerce cannot be made to collect a tax on his sales in the same manner. The main difference is that where goods are sold in bulk, as must be the case down to the retailer, the sales sheets must show the transactions entire, and the invoice should be made to show the transactions with respect to each purchaser. There is nothing to force the druggist to sell the stamp to me. If he was not afraid I would peach, he might let me have the Pluto water for 40 cents and forget the 2 cent stamp. In the general process of distribution in bulk this forgetfulness could not be.

Dr. Adams, while admitting the difficulty of administration of special taxes on medicinal articles, fountain drinks, and "luxuries," and even urging their repeal, still insists on the superiority of special taxes on selected articles of general consumption in preference to a general tax on all articles of consumption. Much as I respect Dr. Adams, I must differ from him. It is one of the annoying weaknesses of the present hodgepodge of sales taxes that no force of Treasury employees can ever check up the tax properly. The constantly reiterated assertion of Dr. Adams that a simple, omnibus overturn tax would impose added confusion on top of a present confusion which it is intended to abolish is one of those things no fellow can understand.

Another of Dr. Adams' obsessions is

that an overturn tax would favor large multiple process concerns as opposed to a series of single process concerns. As against Dr. Adams' theory I would give far greater weight to the testimony of practical business men. Charles E. Lord, one of the largest cotton manufacturers in the United States, ought to know something about his own business. He says:

Multiple process concerns and single process concerns at present exist side by side in the same line of business. Each has its reasons for being. The multiple process concern has certain advantages and disadvantages. It may own sources of raw material, save the profits of intermediary processes, save transportation charges, etc. On the other hand it is clear that in large organizations the overhead and administration charges are greater than in small units, the immobility of the business is greater, often the proportion of the capital not invested in immediately productive sources larger, so that the balance of advantage frequently rests with the single process concern where the product is specialized. The existence of both classes of concerns is due to deep fundamental causes on which so superficial a factor as a 1 per cent tax on sales will have no appreciable bearing.

V

Mr. Lord finds that in the case of single process concerns whose completed products reach the consumer at say \$4.50, the combined tax from that on the raw cotton handled twice (by grower and factor), on the spinning, the dyeing, the weaving, the jobbing and the retailing is $12\frac{2}{5}$ cents, or less than 3 per cent of the consumer's price. In the case of the single process concern the saving in tax would be about one cent, or less than $1/3$ of 1 per cent on the final price.

In the case of the wood pulp industry the total competitive difference between a large organization owning its mines and forests, making its own

chemicals and carrying on every process up to the finished paper, and single process concerns buying wood pulp and manufacturing paper is only about $7/8$ of 1 per cent. Similar figures are reached in other lines of business which have been examined.

Practical considerations like these ought to lay the ghost of monopoly fostered by encouragement of combinations through an overturn tax.

Another bugaboo is the newsboy, the corner fruit man, and the small farmer. How, it is asked, are you going to keep tabs on them? You don't have to. It is proposed to differentiate this overturn tax, which is intended to be practical, from impractical taxes like some of those now on the statute books. That can be done by relieving from responsibility, as collectors of the tax, vendors who do not sell more than \$500 worth of goods in a month or \$6,000 in a year. If the poor newsboy or small tradesman has an overturn of \$500 or more in a month, it is high time that some method be found to force him to keep track of his business by keeping at least a cash book. It is safe to say that the resultant benefit to him would be far greater than the cost to him of the tax. As for the poor farmer who sells less than \$6,000 of produce in a year, it is difficult to feel deep sympathy for the hardship of the tax on him. He not only should, but I venture freely to say that he would, get the same price for his wheat as his neighbor who sold \$10,000 worth. The only difference is that he would not have to turn in to the government the 1 per cent collected from the elevator company.

A representative of the Federation of Farm Bureau Associations writes me that the farmer could not collect the tax from the elevator company because the price of wheat is made in Liverpool, that he could not add a sales tax to

export commodities and neither could he add it on a falling market. As a matter of fact probably no farmer ever sells his wheat directly for export. If he did he would possibly be relieved from collecting that tax from his customer, in which case he would have exactly the same net return as though he sold it to an elevator company and collected a 1 per cent tax. If Mr. Ford sells a Michigan mule to me for \$650 and I sell it in Canada, Mr. Ford bills the 5 per cent tax to me regardless of the destination of the mule. So also if he reduces the price from \$650 to \$510 he continues to bill and collect the 5 per cent.

What can be done with one article on one sale can be done with many articles on many sales. What can be done with an excise tax on ice-cream soda sold to me, or with a tariff tax on coffee, can be done with any article sold by anybody to anybody, only it can be done much more simply and efficiently and justly.

The same farmer authority—one of Congressman Frear's "fifteen ablest men who have ever studied the tax question"—assures me that when a farmer sells his goods for less than cost he impairs his capital. Quite obvious. But if wheat at \$2 a bushel results in impairment of capital without any sales tax, wheat at \$2.02 a bushel with a compulsorily collected sales tax, results in no greater impairment. The tax comes from the purchaser, not the seller. The competition to sell and the loss of capital on an undercost sale are exactly the same with or without the tax.

Are not the words "sales tax" a convenient misnomer? In effect, with a compulsory invoicing, the tax is really a purchase tax. To the extent that the middleman adjusts his price with relation to cost, just as he would do were there no tax, he makes or loses money,

but the tax has no more to do with his decision to sell at a loss than the labor or freight or rental charge. In fact it has far less to do with it because it is smaller, and it is measured as a cost, entirely by his purchases, and not by his sales.

VI

Another screen of underbrush has been cultivated by advocates of a sales tax who talk about it as a substitute for the excess profits tax. It is nothing of the kind. It cannot be, in the very nature of things. In so far as an overturn tax, by an equitable and systematic distribution of the consumption tax burden, could without injustice produce more net revenue than is produced by the present chaotic sales taxes which it is designed to replace, it would relieve the income tax situation.

The excess profits tax is really nothing more nor less than a surtax on corporations, balancing roughly the surtax on individuals. Both the excess profits tax and the individual surtaxes are higher than their productivity point. General consensus now appears to be that 32 per cent or 33 per cent is about the maximum productivity point of individual surtaxes. The problem with respect to corporation taxes is to find the corresponding point and method. It is an entirely different story. It has nothing to do with an overturn sales tax, except as rates of income tax may be adjusted to the productivity of the sales tax.

The real question with respect to the overturn tax is whether or not it would be more simple, more just, more easily administered, more productive, than the present chaotic sales taxes, with prospect of additional chaos and added injustice following an addition to the list of arbitrary levies. To that I can see only one answer—Yes.

I have directed my remark chiefly

to administrative objections. I have assumed that this gathering would agree to the broad proposition that if it were—as I am sure it is—possible to administer an overturn sales tax and make it just what it ought to be—a consumption tax—there would be no objection to the general principle.

The general principle itself is also simple:

It would provide a base for a large portion of the government revenue more tangible than profits and income; not a base necessarily larger than the present base of special sales taxes, augmented by still more special taxes, but a base firmly determined in equity to all.

It would rest fairly as between citizens. The one who consumes the most and spends the most would pay the most in this particular tax.

It would not be a special tax on the man who must buy medicine for his children or on the stenographer who buys an ice-cream soda for her luncheon.

Why should a baby pay a specific tax on its medicine for colic?

Why should a man pay a specific tax on a bottle of liniment for a sore toe?

Should a person when he is ill pay a specific tax and not pay a general tax when he is well?

The existing excises tax the motor

truck, but not the horse-drawn vehicle doing the same work; they tax the fur coat of the farmer and lumberman which he can scarcely do without, but not a cloth coat which for many uses is less desirable; and they tax the piano necessary for the child to obtain its proper musical education, or the band instrument with which he may later earn his living, but not the toy with which he amuses himself.

It would encourage thrift instead of waste. If you don't buy a silk shirt, you do not pay the tax. If you do buy a yacht, you do pay the tax.

It could not increase the price of commodities beyond the amount of the tax itself.

It would be simple in collection and auditing for both government and taxpayer—or more properly, in the latter case, the drafted tax collector.

It would bring the collection of a substantial part of the revenue up to date.

It would be sure in its incidence, simple in its application, economical in its collection, and would have all the attributes of just taxation.

When this base has been supplied, you can adjust your individual and corporate income tax rates to fit the situation and maintain the proper balance.

INTERNATIONAL FINANCIAL RELATIONSHIPS

BY FRED I. KENT*

THE great problem of the world today lies in the restoration of industry. The duty of the United States is to strive for its stimulation in every country of the world. To do this best it is necessary that we extend our commercial relationships with every power at our command.

One great fact has a tremendous bearing upon such relationships that applies at the moment to all countries. This is the premium upon the United States dollar. This premium started in the countries of our Allies, spread to the neutral nations of Europe and those of the enemy countries, and thence through the Americas, the Antipodes, and the Far East until the Japanese Yen, which was long at a premium in the United States, fell below par. It came about first because of the destruction and devastation in the war-torn countries, which made it necessary for them to import food and raw material to enable their peoples to live and re-establish their industries and reconstruct the regions of devastation.

The same reasons which made necessary such importations also prevented the production and manufacture in the countries concerned of sufficient exportable commodities to cover payment for their imports. Along with this condition, the end of the war found prices of world's products at such a high level that the credit of the world was not sufficient to sustain industry. This fact had much to do with the development of the premium on the

United States dollar throughout the world. In the European countries it left the balance of trade against them higher by billions of dollars than would have been true with the same proportionate exchange of commodities if prices had been on the pre-war basis. With the great European workshop running only part time, other nations throughout the world, which had been in the habit of supplying their needs from the production of the countries of Europe, turned to the United States. They were importing from this country at the high prevailing prices. It was then natural that they should begin exporting to us for two reasons: first, because they needed the proceeds of their exports to the United States to pay for their imports from the United States, and second, because exports to Europe could in large part only be made on credit.

The next result from this development was the receipt by the United States of vast quantities of many products which were not required by us for consumption, but that were needed by Europe. For a time we in effect, or actually, re-exported to Europe against credits (after offsetting imports from Europe) the excess imports received from other countries of the world, for which we paid cash. This continued until suddenly the strain of importing from the Americas, Africa, Asia, and Australasia against payment and re-exportation to Europe against credit, on top of other credits established to move our own production to Europe, became too great. This was first noticeable in our money market, which so tightened that further advances to Europe to cover

* Vice-President of the Bankers Trust Company, New York City; Director of the Division of Foreign Exchange of the Federal Reserve Board during the War.

re-exports received from the rest of the world became a real burden. In the meantime increasing prices for goods had induced the Nationals of many countries to make shipments of goods to the United States on consignment, as they hoped to receive the benefit of such price increases as would occur while goods were in transit and being sold. When the absorbing power of the United States was curtailed to the point where goods so received remained in our markets, they became glutted at a speed that was most bewildering, because commodities were coming to us simultaneously from so many sources.

Then came the inevitable crash, and the prices of commodities fell in percentages so great that the losses entailed were almost incomprehensible. Great profits which had been accumulated during the rise in prices were wiped out at a single blow, and where such profits had been distributed through lack of foresight, bankruptcy often occurred. Repudiation of contracts became general, preventing the proper distribution of losses which would otherwise have eased the situation somewhat. This great break in prices in a large number of staple commodities first stopped at the wholesalers, as the retailers hoped to be able to sell such stock as they had on hand at prices that would enable them to profit on the basis of their purchases. Then came the strike of the buying public, which extended throughout the world; for the drop in wholesale prices was known to all, and purchases were curtailed to necessities, as everyone knew that ultimately the retail price must come down also. This development resulted in the stagnation of trade and the entire stoppage of the distribution of many of the world's greatest staples. The effect upon the United States dollar was to increase its price in all countries until it finally reached a premium in every

country of the world. This was, of course, an inevitable development, as goods had been purchased from the United States by non-European countries largely on a basis of payment after 90 days, whereas imports were being consigned to the United States for later sale. After the drop in prices had taken place, while payment for exports from the United States was still to be made on the basis of the old high prices, consigned commodities could only be sold at the new low prices; and in many cases the stagnation of the markets was such that distribution in quantity at any price was impossible. The dollars, therefore, which the Nationals of other countries expected to receive, and which if received, would have enabled them to pay for their imports from the United States, did not materialize; and we now find that the United States dollar is at a premium in all countries. To the unthinking, this may be a source of pride, but it is of that pride which goeth before a fall.

II

That our exports still continue against the handicap of the high-priced dollar is only because the world's necessity outside of the United States exceeds its ability to produce. With their depreciated exchanges, the European nations can confidently expect to take back much of their former trade, which the United States holds at the moment, as rapidly as their ability to produce increases. This would not be at all harmful to the United States if the buying power of Europe should increase proportionately and the exchanges should move toward normal, thus restoring competition for foreign trade on a proper basis to all countries. Unfortunately while the governments of European nations continue to operate on a basis of governmental waste,

which has to be met through inflation, the exchanges cannot be expected to become permanently better; nor while irrational radicalism exists in force is it safe for America to take the part in the restoration of European industry that it would otherwise be able to take through the extension of credit. Any security created by man can be destroyed by man. Therefore, while there is the intent to destroy on the part of any appreciable proportion of the individuals in any nation it is not safe to extend credit to such nation on any kind of security. Governments in every country should understand this and realize that until they succeed in holding in check and within bounds the will to destroy which exists in the minds of certain human beings, they cannot expect, and have no right to expect, that other nations will extend credit to their Nationals. Conversely credit may often be safely extended under proper arrangements to industries in countries where governments may be in financial difficulties, provided there is no menace of extreme radicalism.

Bearing this whole situation in mind, the question before the banking and commercial interests of the United States is whether we shall calmly stand aside and wait for the return of normal foreign trade, which it must be admitted will come about in time, or whether we shall take such steps as are possible to accelerate the return of a normal and natural interchange of goods between countries, and thereby prevent the worst of the evil effects inevitable during the period of readjustment upon our trade and industrial life. Should we choose the former method, we can go on as we are, hope for the best and meet our problems day by day as they arise. Should we choose the latter method, it is essential that we think ahead and solve our difficulties through prevention rather than

through the study of a cure after it is too late. What can we see ahead that might have a bearing upon our plans?

III

When Germany knows how much she must pay the Allies, and the Allied nations know what they will receive from Germany, and if industry is then stimulated in Germany, as it well may be, and Allied governments can go before their peoples with budgets which do not depend for their settlement upon unknown quantities, and if, as is apt to occur under such circumstances, extreme radicalism loses its force, then, and then only, can the reconstruction of European trade and finance really begin. From such time European progress can develop little by little under a stress of much suffering over a long period, during which our own industry will suffer; or she can obtain raw materials on a basis of payment in years to come that will enable greater activity in her industries and a more rapid return to prosperity, with a consequent increase in her buying power, and its resultant inestimable value to the United States. If after the fixation of the reparations we have, in this country, machinery which will enable the extension of credits, for periods of say one to five years, from capital received in small amounts from all parts of the country, there is not the slightest doubt but that the restoration of livable conditions abroad and at home will come more quickly than is otherwise possible. This same machinery which could extend such credits to Europe would be exactly as available for use in many other countries of the world, where they have the ability to produce sufficient commodities for export to enable certain payment when normal trade is restored.

The banks of the United States, na-

tional and state, are not justified in extending credits on any such basis. Individuals in the United States cannot today invest their savings in miscellaneous securities built up in odd amounts to meet special foreign trade transactions. When our manufacturing, producing, and exporting interests sell their goods abroad against future payment in part or in whole, such interests tie up the money so advanced, which may have been taken from their capital or borrowed from their bankers, and obtain from it exactly one turnover and no more. If instead of loaning such funds in this manner such interests should put a portion of such funds as they can spare into the capital of a corporation organized under the Edge law, for every dollar they put in they could expect a return of many times, not to exceed ten times under the law, of the amount invested in our foreign trade. This would be true because such a corporation could, through the sale of its debentures, obtain funds equal to many times its capital, not exceeding ten times, against foreign loans made by it. There is not the slightest doubt but that the foreign investments of such a corporation can be made on a basis of as great security as is possible in human operations. Such investments would be in varying amounts, from those comparatively small to others which would run into millions of dollars. They could be built up to represent the best in each country where they were undertaken, and none need be placed in any country where the integrity of the people as a whole is doubtful. The debentures of such a corporation, backed by such a diversified collateral, should represent as safe and sound an investment as the ability of man is able to produce. A corporation of the size intended will be such as to attract the very strongest and safest interests in every country. The amend-

ment of the law that is being asked for, which will enable the directors to call the balance of the stock at their discretion after the payment of the first 25 per cent, should prove of great value to the functioning of the organization without detracting from its standing.

A large capitalization, together with the power of the corporation to issue debentures, would make such a sum available for the extension of credits, that it is conceivable that there might be a tremendous pressure upon governments in certain countries by their Nationals to change wasteful ways, and get their houses in order, so that such Nationals would be eligible to operate with this great American Corporation.

There is no question whatever but that great ability will be required on the part of the management; but after the achievements of our people in commerce and finance throughout the length and breadth of our country, who can say that the bringing together of the efficient management required is an impossibility? True, the men needed will have to be taken from other positions of importance, otherwise their training would have to be entirely with the new company; but men of ability are changing their positions every day, and the Secretary of the Foreign Trade Financing Corporation already has in his possession applications from many men of unusual experience and ability. New organizations with possibilities before them of unusual development naturally appeal to the able and ambitious. If we fail to establish the corporation because of our fear that it cannot be successfully managed, we would actually be admitting that we are beaten as a nation when it comes to the question of foreign trade, and that therefore we might as well lie down and let happen what will.

IV

There is no question but that before calling the capital, after its subscription, of an institution of the scope intended, its ability to meet the need for which it is being organized should be thoroughly understood. For the purpose of establishing this fact, the Organization Committee has appointed a special committee with power to act. This special committee is made up of the members of the Executive Committee of the Federal Advisory Council of the Federal Reserve Board. The members of this committee are all men of national reputation for ability and good judgment; and those who subscribed for stock in the corporation may know that their subscription will not be called until in the opinion of the members of the Executive Committee of the Federal Advisory Council of the Federal Reserve Board the time is ripe, the need is known, and the good of the whole country demands that the organization be put in force.

Where stockholders of the corporation find business opportunities in foreign countries of a nature that would enable the building up of a satisfactory credit against which dollars would be advanced for future payment, the corporation within its ability could be expected to act. If some railway in some foreign country required locomotives or cars, or equipment of any kind, and it was in position to give satisfactory security in equipment trusts, bonds, government guarantees, or whatever was necessary in the country of the operation because of conditions existing, and where payment could be expected in say from one to five years, the corporation could legitimately make the loan in dollars to the railway, the proceeds of which would go to the locomotive or equipment companies in the United States which had the con-

tracts for the manufactures of materials. The additional wages which would be received by the labor in the United States involved in the production of the things themselves, and all of the raw materials which would go into them, would be available for expenditure in the United States in manufactures and production intended for domestic use.

If certain countries desired to import grain or flour for their peoples, and wished to make payment over a period of time longer than existing banks can issue credits, the Foreign Trade Financing Corporation could furnish the dollars, wherever proper security could be given. Should importers in certain countries require dollars to pay for imports from the United States where the governments felt that the good of the country demanded that they further such operations by means of their guarantees, the corporation could advance dollars for future payment, if the operation was surrounded with proper safeguards, with great benefit to the foreign country and to the United States.

One could go on and enumerate for the reader supposable cases in which the corporation could legitimately and effectively take part, which would cover a large portion of our exportable production, in order to show the scope of the corporation and the manner in which it might operate. Nothing would be gained, however, by a repetition of such statements changed to meet the different forms of financing that special commodities require.

It is interesting to know, however, that at present there are known propositions which would enable the investment of some millions of dollars, many of which from information at hand would prove on investigation to be safe investments. Further, they are of a nature that if carried out would

prove of real value to the foreign trade of this country.

It must be borne in mind that the organization would have great elasticity in operation in connection with the forms of collateral which it might take. They might cover government obligations or guarantees, notes of industrial organizations, mortgages of any kind, notes with collateral attached in the form of bonds, stocks, or otherwise, commodities in warehouse, in transit, or in process of production or manufacture, and any other form of security available that the conditions of any proposition which might come before the corporation might require to build up a safe loan.

The corporation would always be free to reject any and all propositions that were not entirely satisfactory from the standpoint of safety and desirability.

V

There is one great question which has a most important bearing upon our future foreign trade relationships that the American people may be called upon to decide before many months, and that for the good of all concerned should be decided as quickly as possible. Without taking a positive position upon it at the moment, there are certain phases of the question that I believe we should all be thinking about, so that we may be ready to express our opinion promptly and intelligently when called upon to do so. This question has to do with the proposed cancellation of the Allied indebtedness to the United States.

The good of the whole world requires that the integrity of an obligation be upheld between nations as well as between individuals. If the entire Allied indebtedness is cancelled without proper reason, is there not great danger that if this country were menaced in a

future war when loans to Allies might be important to our welfare, that a future Secretary of the Treasury might hesitate before acting until our interests were seriously jeopardized, because he might not feel justified in giving funds, even though authorized to make advances of credit? On the other side, with a possible \$4,000,000,000 being owed our manufacturers, producers, banks, and individuals by European countries and their Nationals, is it wise for us to blindly insist upon payment of the indebtedness of the Allies to the United States Government of a further \$10,000,000,000 when practically the total sum of say \$14,000,000,000 must be received by us in imports of commodities before further imports can be accepted in payment for our exports?

Accepting these conditions as being true for the moment, is there any way to solve the problem and meet them all?

After the United States declared war upon Germany in April, 1917, it had to carry on the war until it was won or lost, or else come to a compromise. If it had the force to win, a compromise was impossible, in view of the causes for the Declaration of War. If while the United States was preparing for war Germany had overrun France and Italy, and had forced a peace with our European Allies, our task would have been multiplied almost beyond comprehension. The cost to us in men and money would have left our nation so impoverished that the weight of the burden in sorrow and suffering would have borne down upon our people possibly for generations.

Our first act, therefore, was to extend credits to our Allies in order that they might hold the line until we were ready; so that we could land our troops on friendly soil after crossing 3,000 miles of ocean, instead of having a Gallipoli. For more than one year

loaned American dollars and Allied troops carried on the war; and it was due to guns and ammunition in the hands of the soldiers of our Allies, purchased from the proceeds of credits extended by the United States government to Great Britain, France, and Italy, that the tremendous drives of the enemy on the western front were checked while awaiting the arrival of the American army. When the troops of the United States went into battle in force, their difficulties, great as they were, and the loss of life such as it was, were as nothing compared to what would have been true if our Allies had not had guns and ammunition supplied by our dollars with which to check the great German drive. On the other hand, the credits extended to our Allies were not all used for direct war purposes. Expenditures for other purposes undoubtedly contributed to the ability of the Allies to carry on the war. Yet as events developed, their influence was probably more largely felt in better conditions in the Allied countries after the armistice. A very clean line of demarcation can probably be drawn between expenditures which went directly through to the battlefields and those which were made for other purposes. In a large sense the division would probably be along the lines of money which was spent for purposes of destruction, and money which was spent for purposes of construction. In coming to a decision as to the classification of expenditures, no friction whatever need develop between the Allied governments and the United States; as the matter would not be one of negotiation, because the American government would have the full power to determine such classification, and without consultation with other governments unless it desired to do so. All difficult decisions could, therefore, be rendered arbitrarily by the officials

of the United States government. As we have a full statement of expenditures made from the proceeds of loans extended the Allied governments the elimination of all items which were clearly of direct benefit to the United States in the war could be accomplished without difficulty, and the Allied governments could then be notified that the amount ascertained had been cancelled. Maturities could then be fixed for the balances remaining on a basis of negotiation aimed to cause the least monetary disturbance to all.

Except for expedience, there has never been any suggestion that the loans be cancelled on any ground except that they were incurred between Allies to enable the better prosecution of a common war. One never heard any suggestion that the Anglo-French loan, nor any of the other war loans which were held by the people, should be cancelled. Nor is there any reason to expect that the Allied nations would desire, and much less suggest, that if the United States should cancel the portion of the loans to the Allies which cover those things that went more or less direct to the battlefields, that the balance should not be paid. And as to our own country? Are we certain that we as a people are willing to allow our Allies to pay for the guns and munitions that their dead borrowed from us that our own boys might live?

If the Allied indebtedness to us were divided in this manner, partly cancelled and partly maintained, the integrity of an obligation would not be jeopardized, foreign trade difficulties of the future would be alleviated, the friendship of our Allies would be strengthened, and our power in the world for good would be greatly multiplied through the knowledge that would be borne abroad that the people of the United States of America stood for justice in war and justice in peace.

PROBLEMS FOR THE BUSINESS EXECUTIVE

ACCOUNTING PROBLEMS

By HAROLD DUDLEY GREELEY*

IN the April issue it was pointed out that a reader had requested a discussion of certain forms and procedures in connection with statements of profit and loss. It was stated in that issue that these matters would be discussed not with the idea of setting up a standard to be uniformly observed, but rather in the hope that the suggestions made might induce correspondence from other readers which would lead to a forum discussion. While double-entry bookkeeping is a science based upon a very simple premise but developed logically into complex forms, accountancy, or the application of double-entry bookkeeping in its advanced forms, is not a science but an art. Consequently, there can be no standard or set method of preparing statements to present financial conditions or operating results.

However, the art of preparing statements, like every other art, has certain rules which should be observed by all

persons who prepare statements. Perhaps the most fundamental one is that the statement should be so prepared as to be most intelligible to the persons who are to use it, bearing in mind, however, the fact that the statement may fall into the hands of other persons and should, therefore, be intelligible generally, that is, to the average reasonable man to whom reference was made in a preceding issue. In this article attention will be invited to certain general rules of presentation which may be observed without in any way interfering with the emphasizing in a statement of any particular fact or group of facts, which it seems advisable under the circumstances of an actual case to throw into the foreground.

It is believed that a discussion of this nature will be more readable if it is related to an example. Accordingly, the following statements have been prepared and will be referred to in the succeeding paragraphs:

STATEMENT OF INCOME AND PROFIT AND LOSS FOR THE YEAR ENDED DECEMBER 31, 1920

SUMMARY STATEMENT

SALES:

Gross.....	\$461,382.95
Less Returns and Allowances.....	2,843.67
Net.....	\$458,539.28
COST OF GOODS SOLD (per Schedule 1).....	360,886.44
GROSS PROFIT.....	\$ 97,652.84
SELLING AND DELIVERY EXPENSE (per Schedule 2).....	45,489.10
NET PROFIT ON SALES.....	\$ 52,163.74
ADMINISTRATIVE EXPENSE (per Schedule 3).....	19,478.06
NET PROFIT FROM OPERATION.....	\$ 32,685.68

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OTHER INCOME:

Income from Investments	\$ 1,332.98		
Interest on Bank Balances	241.35		
Cash Discounts on Purchases	8,340.72	\$ 9,915.05	

OTHER EXPENSE:

Interest on Notes Payable	\$ 421.87		
Cash Discounts on Sales	21,402.95	21,824.82	11,909.77

NET PROFIT FOR THE PERIOD			<u>\$ 20,775.91</u>
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SCHEDULE 1—COST OF GOODS SOLD

COST OF GOODS MANUFACTURED:

Work-in-Process Inventory, Jan. 1, 1920	\$ 21,469.72
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Material Costs:

Raw Material Inventory, Jan. 1, 1920	\$ 12,416.01
Purchases: Gross	\$91,842.67
Less Returns	3,401.64

Net	88,441.03
Freight and Cartage Inward	1,247.89

Total	\$102,104.93
Deduct—Raw Material Inventory, Dec. 31, 1920	11,307.38

Net Material Cost	90,797.55
Direct Labor	201,326.48

MANUFACTURING OVERHEAD:

Indirect Labor	\$ 25,401.96
Power	21,340.75
Factory Supplies and Expense	12,128.40
Factory Repairs	14,867.38
Factory Depreciation	9,912.56
Factory Insurance	3,418.72
Factory Taxes	4,160.82

Total	91,230.59
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Total	\$404,824.34
Deduct—Work-in-Process Inventory, Dec. 31, 1920	25,379.06

Cost of Goods Manufactured	\$379,445.28
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INCREASE IN FINISHED GOODS INVENTORY:

Inventory, Dec. 31, 1920	\$ 98,402.75
Inventory, Jan. 1, 1920	79,843.91
Increase	18,558.84

COST OF GOODS SOLD, per Summary	<u>\$360,886.44</u>
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The above statements are not complete, but they illustrate all of the matters of presentation which it is thought are important. The first one is a summary statement indicating that detailed information is shown by supporting schedules. Of these schedules only the first is printed, because the other schedules are too simple to require extended comment. The preparation of a schedule for selling and delivery expense was mentioned in the April issue. The schedule for administrative expense need be but a list of the items composing that expense, and the only requirement as to the form of such a schedule is that it show a total which will agree with the corresponding figure on the summary statement. The schedule for the cost of goods sold is, however, more complicated and accordingly has been printed in full.

The first rule of presentation illustrated by these schedules is that a summary showing operating results by totals is first presented. The fundamental idea underlying this method of statement preparation is that the reader of a statement should be given the principal idea of it as concisely as possible, and this idea should be presented to him at the beginning of the statement, so that if he wants only the net result shown by the statement, he can ascertain it without extended or laborious reading. If, however, he desires to analyze the result for the purpose of comparing it with preceding results or similar statements of comparable businesses, he should be given the details in supporting schedules. If statements are prepared with completed ideas stated first, supported by all the necessary details, the user of a statement can be guided by his own inclinations in the matter of the extent to which he wishes to scrutinize it. If, on the other hand, a statement is so prepared that the reader of it is compelled to examine a mass of figures before he can determine the net result shown by it, he is likely either to miss the true significance of the statement through his failure to find the really vital figures, or to lose interest in it before he reaches that part which presents the final conclusion. As a practical matter, it is sometimes difficult to determine when a supporting schedule is needed. One should not be

used where the detailed items are few. For example, in the summary statement shown above, there would be no need for a schedule showing the details of the Sales figure because only three items are involved in it. On the other hand, an attempt to incorporate in the summary statement all of the details making up the cost of goods sold would result in having no summary at all. The statement would then be so long and so involved as to be almost impracticable for a busy executive.

The statements presented above are in what is known as the running or statement form, designed to be read from the top down to the bottom. Another form sometimes used is the account form which resembles a ledger account. In the latter form of statement the expense items are listed on the left side of the statement and the income items on the right, with the resulting balance of profit or loss shown on the left or right side respectively, as the case may require. Of these two forms it is believed that the statement form shown above is more readable and, therefore, more useful for the ordinary presentation of financial operations.

The title of the statement deserves some discussion, because of a distinct lack of uniformity found in practice. The title used in the foregoing statement, namely, "Statement of Income and Profit and Loss," is believed to be the most truly descriptive for a general manufacturing business which has income from other sources, such as from investments. The use of the word "income" indicates that part of its earnings have originated from sources outside of the regular operation of the business. If all of its earnings had been from sources such as investments, or, in other words, if the earnings had not been from the regular operation of a business, a suitable title for a statement of earnings might be "Statement of Income and Expense." Such a title would be appropriate, for example, for use in connection with a society, the income of which was entirely from members' dues and initiation fees.

Some accountants prefer to use the word "Trading" in the title of the statement. While it is true that in a manufacturing and

selling business a portion of the income is received from trading, the addition of the word would result in a long and cumbersome title, and it is believed that the term "profit and loss" is sufficient to indicate operating results and the word "income" is sufficient to indicate that a portion of the earnings of the business arose from sources outside of the regular operation of the business. If there were no income from outside sources, then the title might be "Statement of Trading and Profit and Loss."

In this connection it might be well to note that the word "Expenditure" should not be used in a statement of this sort. An expenditure is a payment or an obligation to pay for something, and it may or may not represent an expense, dependent upon the purpose of the expenditure. An expenditure which results in the acquisition of a fixed asset, like machinery to be used for manufacturing the product in which the business deals, would not be an expense, but would be known as a capital expenditure. It may be noted also that a statement of cash receipts and payments can never exactly reflect the earnings of a business, notwithstanding the fact that the business may be on a strictly cash basis. That this is so will be seen when one takes account of the element of depreciation, for example. This is an expense and yet it is not reflected in any way in the cash receipts or payments. A number of other items not related to earnings are oftentimes reflected in the cash statement. A statement of cash receipts and payments is useful in many ways and in some cases it indicates approximately what the business has earned or lost, but it can never fully perform the function of the statement of income and profit and loss.

In the preparation of typewritten or printed statements sufficient attention is not always given to the matter of typography. Since the statement must necessarily make its appeal through the eye, the style of it should be such as to assist in establishing the main ideas to be conveyed. One of the most important rules to be

observed is that similar items should be printed in a similar way. That is to say, all headings representing items of equal importance on the statement should be set up in a uniform style.

Reference to the summary statement printed above will show that each of the principal items is capitalized and the supporting detail is printed in smaller type. This style is followed whether the supporting detail is shown on the summary or shown in a supporting schedule. Under this style of printing, the figures relating to the sales can readily be compared with the figure showing the cost of goods sold, because the headings for each of these sections are in uniform type. It is believed that this style of printing is preferable, although some accounting firms make it a practice to emphasize the last or significant figure in each group by capitalizing its caption. For example, their practice would be to show all the information for sales in small type, except "net sales" which would be capitalized.

In the schedule showing the cost of goods sold, the three main captions which are capitalized are those showing the cost of goods manufactured, the increase in the finished goods inventory, and the cost of goods actually sold. Setting the statement up in this way gives a separate item showing the cost of goods manufactured. This figure is frequently useful in preparing statistical information concerning the cost of manufacturing.

It will be noted from the schedule showing the cost of goods sold that depreciation, insurance, and taxes are included in the manufacturing overhead. It must be understood, of course, that these items represent only the expenses applicable directly to the factory. Similar expenses would be expected in connection with other departments of the business. It is generally found most practicable to distribute expenses by departments, and in accordance with that plan all of the general expenses applicable to the factory are listed in the manufacturing overhead.

A PROBLEM IN CORPORATE FINANCING

BY ARTHUR S. DEWING*

OFTENTIMES extremely interesting problems arise in connection with the finances of corporate enterprises. The drafting of a financial plan at the time of a reorganization or a consolidation necessitates the consideration of many factors. The following problem involves some points which must be taken into account in providing for the financing of a consolidation of public utility companies. Among these features may be mentioned:

1. The estimate of costs of rehabilitating the properties to fit efficiently into the new operating plan.
2. The forecasting of future earnings.
3. The money requirements and the plan of financing.

THE PROBLEM

THE ARRABASSETT POWER COMPANY

In 1912 James Stetson, an electrical engineer, developed a water-power on the Arrabassett River fourteen and a half miles above Galesboro, a city of 27,000 inhabitants. He acquired, for a cash payment of \$316,000, the local distributing system of Galesboro. The hydroelectric electrical development alone cost \$617,000 and the transmission line, substation to Galesboro, \$46,000. This total money cost was met by advances from a syndicate headed by William Sampson and Company, under an agreement by which the Sampson firm obligated themselves to sell bonds and preferred stock of the enterprise (after it had been in operation a year) so as to yield enough money to reimburse the syndicate for its cash advances together with 6% interest and 2% commission. The common stock was to be divided so that a third went to Stetson, a third to William Sampson and Company, and a third to the individual underwriters. The Sampson firm were underwriting members of their syndicate to the extent of a four-tenths interest.

* Assistant Professor of Economics, Harvard University, Cambridge, Mass.

The developments and physical connection with Galesboro were completed November 8, 1912. The calendar year of 1913 showed the following earning statement of the hydroelectric development and the distributing system at Galesboro.

Gross Earnings.....	\$339,000
Operating Expenses (including taxes).....	162,000
	<hr/>
	\$177,000

On the basis of this showing the Galesboro Electric Power Company was organized with the following capitalization:

1st Mortgage 30-year, Sinking Fund 5% Bonds (closed issue, callable at 105)	\$1,000,000
6% Preferred Stock (\$500,000 authorized) issued	250,000
Common Stock	1,500,000

William Sampson and Company sold the entire issue of bonds to M. U. Harlow and Company for 88½%, who retailed them to investors of 93½%. They sold the issue of preferred stock to a group of six small banking houses for 90%, who in turn, sold the stock to small investors for 98½%. The two issues, therefore, netted the company \$1,110,000. The entire advances of the syndicate, including interest, expenses, and commissions amounted to \$1,082,000. The balance of \$18,000 was returned to the company's treasury; the common stock was distributed in accordance with the original syndicate agreement.

The business prospered. In the early spring of 1916 Stetson acquired options on the distributing systems in six neighboring towns and cities, with the intention of promoting a large operating company deriving its power from an enlargement of the original Arrabassett development. Four of these towns lay within four miles of the power station of Galesboro, the two cities were on opposite sides of a river twenty-six miles away, in the opposite direction from Galesboro. The following are pertinent:

	GALESBORO ELECTRIC POWER COM- PANY	GARDNER ELECTRIC COMPANY	BELGRADE ELECTRIC LIGHT COM- PANY	CLIFTON ELECTRIC COMPANY	BOXBORO ELECTRIC COMPANY	SUMPTER ELECTRIC LIGHT COM- PANY	FORT RILEY
Population Served.....	30,000	4,000	1,000	3,500	900	16,000	12,000
Number of Meters.....	2,817	160	85	287	46	982	312
Condition of Distributing System.....	Good	Bad	Good	Fair	Poor	Fair	Poor
Amount to be Spent im- mediately for Betterments	None	28,000	2,000	16,000	21,000	38,000	52,000
Load Factor.....	Good	Poor	Poor	Poor	Poor, Twilight to Midnight	Fair	Poor
Local Management.....	Good	Inefficient	Fair	Good	Poor	Fair	Poor
Nature of Population.....	Small Industries	Farming Center	Village with Creamery	County Seat Retired Farmers	Country Village	County Seat Manufactur- ing	Wood Work- ing Industry

OPERATING DATA: (EVEN 000)	GALESBORO	GARDNER	BELGRADE	CLIFTON	BOXBORO	SUMPTER	FORT RILEY
Gross Earnings Average through Preceding 3 Years	\$352,800	\$31,300	\$11,600	\$16,400	\$4,700	\$116,300	\$37,000
Year 1915.....	364,000	32,700	12,900	48,100	4,100	121,500	31,900
Net after Taxes Average 3 Years.....	189,300	9,300	4,700	20,300	1,200	39,100	7,600
Year 1915.....	197,900	9,100	4,800	23,000	900	42,700	2,800
CAPITALIZATION:							
Bonds.....	\$1,000,000 (5s)	\$200,000 (5s)	\$92,000 (4s)	\$250,000 (5s)	.....	\$500,000 (4s)	\$100,000 (5s)
Preferred Stock.....	400,000 (6%)	.....	.....	100,000 (6%)	.....	.....	.....
Common Stock.....	1,500,000	200,000	100,000	100,000	81,000	500,000	300,000
Option Price.....	.....	Bonds at 61% and stock thrown in	\$8 a share for all of common stock	\$71 a share for preferred actual, \$31 a share for common	\$15,000 for property free from debts	\$20 a share for the stock	In hands of receiver Total cost about \$37,000

Stetson estimates that improvements at the power station, in order to furnish ample power, will require \$280,000. A new transmission line to Sumpter and Fort Riley will cost, with substation, \$118,000. Subordinate lines from the power-station from points on the Galesboro line to reach the four small towns will cost \$18,000. As soon as the connections are completed from the six new towns and cities with the power house, the previous operating ratio will be cut 12% immediately. This will, however, entail an additional expense of \$400 in the operation of the power-house, the costs of which are included in the statement of the Galesboro Electric Power Company. It will require until September 1, 1916, to

complete the improvements at the power development and to build the necessary connecting lines.

Stetson further estimates that if the expenditures on the respective distributing systems for the six new towns and cities are made, there will be an increase of at least \$42,000 in gross earnings during the year immediately following the improvements. Furthermore when there has been this increase in gross revenue the composite operating ratio, including Galesboro, should show a further decline of 2%. Without expenditure for important betterments Galesboro will show a rate of increase of gross of about the average for the last three years.

SOLUTION TO PROBLEM

General Comment. An inspection of the data of the problem shows the following important pertinent facts:

1. Control

- (a) Through the distribution of the common stock of the Galesboro Electric Power Company, Stetson receives \$500,000 or a third; William Sampson and Company receives \$700,000. The two interests, together, therefore control the equity of this property.
- (b) The control of the new Arrabasset Power Company will rest with the same interests as the Galesboro Electric Power Company; the latter will form the nucleus of the new power company.

2. Past earnings

Considering the available data the aggregate earnings of the seven properties to be combined are:

	AVERAGE OF PRECEDING THREE YEARS	PRECEDING YEAR (1915)
Gross Earnings.....	\$600,100	\$615,200
Net Earnings.....	271,500	281,200

3. Money Requirements

Since Stetson and the Sampson firm control most of the common stock of the Galesboro Electric Power Company, the problem will be to finance the purchase of the other six properties. This will require at a minimum \$384,000 in money. This leaves \$842,000 par value of bonds, not considering the Galesboro securities. In addition \$416,000 will be required before September 1, 1916, for making the connections. Likewise, \$157,000 must be spent immediately for improvements in the six towns. In case the promotion should be planned so as to extinguish or refund the underlying bonds, cash would have to be provided in addition, to acquire \$1,000,000 Galesboro bonds and \$842,000 of bonds of other corporations.

4. Future earnings

On the presumption of the general accuracy of the estimates we may infer the following facts:

- (a) The operating ratio of the six towns (not including Galesboro) was in 1915, 67%. Connections with the Galesboro power-house will reduce this to 55%. These connections will be finished September 1, 1916. They will entail an increase of \$400 in the Galesboro operating expenses.
- (b) The first full year for which the estimates are applicable, is the year September 1, 1916 to September 1, 1917.
- (c) There will be an increase in \$42,000 in the gross earnings of the six towns (not including Galesboro) for the year September 1, 1916 to September 1, 1917.
- (d) The rate of increase of gross for Galesboro alone will be continued through the year ending September 1, 1917. This rate of increase is to be computed as follows:

Gross for Galesboro calendar year 1913.....	\$339,000
Gross for Galesboro " " 1914.....	354,800 ¹
Gross for Galesboro " " 1915.....	364,600
Rate of increase 1914 over 1913.....	\$16,800 or 5%
" " " 1915 " 1914.....	9,800 or 2.8%
Average rate of increase.....	3.9% or 4% approx.

During the calendar year 1916, Galesboro would have a gross of approximately \$379,100. During the calendar year 1917, the gross earnings would be \$395,200. By dead reckoning the gross earnings for the year from September 1, 1916 to September 1, 1917 would be \$389,800.

(c) The operating ratio for Galesboro alone would remain constant, except that the operating expenses would be increased by \$400.

(f) The operating ratio for the entire properties, all seven, will be decreased by 2%.

On the basis of these facts we may proceed to estimate the gross and net earnings of the entire promotion, for the year ending September 1, 1917 as follows:

Gross, Galesboro.....	\$389,800 (Preceding paragraph, section d)
Six Towns.....	293,200 (The 1915 gross plus \$42,000)
Total.....	\$683,000

The estimate of the operating expenses and net earnings is much more complicated. The problem is not clear as to whether the reduction of 12% in the operating ratio for the six towns applies before there has been an increase of \$42,000 due to internal improvements, or after. The problem seems to imply that this reduction is quite independent of the reduction of 2% in operating ratio, following the total increase of gross earnings. We will assume that the internal improvements are all made before September 1, 1916, since the wording is "amount to be spent immediately for betterments". Consequently the operating expenses for the six towns alone would, for the year from September 1, 1916 to September 1, 1917, be 55% of \$293,200 (\$251,200 gross for 1915 plus \$42,000 addi-

tional due to internal betterments) or \$161,300. This leaves net earnings of \$131,900 for the six towns alone, for the year in question.

The operating ratio for Galesboro for 1915 was 46% approximately. The operating expenses for the year from September 1, 1916 to September 1, 1917 would be \$179,000, without considering the additional \$400. This would increase the operating expenses to \$179,700. It would leave net earnings for Galesboro of \$210,100. Putting these figures together (and still omitting from consideration the general reduction of 2% in operating expenses) we have for the year ending September 1, 1917:

This represents an operating ratio of 50%. There will be a reduction of 2% for the entire consolidated property—48%. This

	Gross	Operating	Net
Galesboro.....	\$389,800	\$179,700	\$210,100
Six Towns.....	293,200	161,300	131,900
Totals.....	\$683,000	\$341,000	\$342,000

¹ Computed as follows: Let x represent 1914

$$\frac{\$339,000 + x + \$364,600}{2} = \$352,800$$

will bring about the following estimated statement of the entire consolidation for the year from September 1, 1916 to September 1, 1917:

Gross Earnings.....	\$683,000
Operating Expenses.....	327,800
Net Earnings.....	355,200

We may now proceed to the discussion of the financial plan of the new consolidation. The bankers have before them three possible general plans, subject to almost an infinite number of modifications.

1. To advance, either themselves or through a syndicate, enough money to carry out the promotion and hold the securities until the estimated earnings are actually realized.

2. To pay off all the bonds and create an entirely new financial plan. Enough of these new securities would then be sold to furnish the money to pay the bonds and make the improvements.

3. To form a holding company which would own only the equities in the seven subsidiaries. All the underlying bonds, so far as possible, and the preferred stock of the Galesboro Electric Power Company, would remain outstanding. Holding company bonds and stocks would be sold to obtain money for the minimum cash requirements.

A comparison of these general plans shows that the first involves the greatest risk to the bankers. It would bring, however, in case the estimated earnings were actually realized, the greatest profit to the bankers and presumably to the promoter. The second plan would involve the largest immediate cash requirement; the third plan, the least cash requirement.

The spring of 1916 afforded an excellent market for securities. High grade public utility bonds commanded a 4.80% market, good grade a 5.10% market, medium grade a 5.45% market. Bankers would recognize this. They would wish to take advantage of it. They would therefore discard the first plan of a carrying syndicate.

The execution of either of the other plans would involve the immediate sale of securities. These securities would be sold on the basis of past earnings and future prospects. Let us consider exactly what is the outlook

for new securities on the basis of past earnings only.

Provided the Galesboro, Belgrade, Clifton and Sumpter bonds are not paid or refunded, they will require a fixed charge of \$86,180 a year, to which must be added the preferred stock dividend on the Galesboro 6% preferred stock, \$24,000, making \$110,180 of fixed and contingent charges ahead of any charges to be created in paying for the properties and improvements. The properties and improvements will require \$957,000, aside from the underlying securities mentioned in the preceding sentence. Granting, for the purposes of "trying out" a plan that this money will cost the new company 6%, the added charges are \$57,420, making a total charge of \$167,600, to compare with actual net earnings of \$281,200 and prospective earnings of \$355,200. This was not, even in 1916, a particularly strong showing upon which to issue definite securities. It could be used, however, provided the cash to be raised was small in amount and the bonds sold to obtain the cash secured by a first mortgage, without prior liens, on the entire property.

The Galesboro bonds were stronger than any bonds likely to be issued by the consolidated company. They must be either paid off or exchanged into new securities on a very favorable basis. This applies with less force to the Galesboro preferred stock.

The Belgrade and Sumpter bonds, yielding only 4% and representing unsubstantial liens on small properties could surely be exchanged into new bonds. Owing to the narrow margin of earnings available, the Clifton bonds could be exchanged on about an even basis. A small premium or discount, either way, on the refunding of these three small bond issues would not be of importance in determining the general financial plan.

On the basis of past earnings \$2,800,000 of 5% first mortgage bonds only could be issued, since bonds of a public utility such as this should show past earnings at least twice interest charges. This would absorb \$140,000 of actual past earnings. Preferred stock to such an amount could be issued that the dividend would not absorb more than a third to two fifths of the remaining earnings. This would permit the issue of

\$750,000 of 7% preferred stock. The amount of common stock is unimportant, except to the holders of the \$300,000 common stock of Galesboro not held by Stetson and Simpson. An equitable adjustment of this will be discussed presently.

We have therefore the following senior securities to use in the promotion:

First mortgage twenty year 5% bonds.....	\$2,800,000
Preferred stock 7%.....	750,000

An offer is now made to the holders of the \$1,000,000 Galesboro bonds to exchange them, par for par, into the new bonds together with a cash bonus of 10% or \$100 a bond. This would enable the holders to mark their bonds down to 83½. A medium grade 5% public utility bond, showing net earnings of twice interest charges, was worth about 88 in the spring of 1916. We will assume, therefore, that the proposition is accepted by some 95% of the bondholders. The remaining 5% of bonds are called at 105 and the Galesboro mortgage is canceled.

The holders of the Belgrade, Clifton and Sumpter bonds are offered par in new bonds. The offer is accepted, with the exception of the holders of \$6,000 par value of bonds. This amount of money is deposited with the respective trustees and then the mortgages are canceled.

These refunding operations absorb \$1,786,000 of new bonds, and cost as follows:

Bonus to \$950,000 Galesboro bonds.....	\$95,000
Calling \$50,000 Galesboro bonds	52,500
Deposit on small bond issues...	6,000
	<hr/>
	\$153,500

As stated earlier, the properties and the contemplated improvements will cost \$957,000 in money, aside from the bonds to be refunded and the Galesboro common and preferred stocks. With the money required for the bond refunding, there must be raised \$1,110,500.

The preferred stockholders of the Galesboro Company are offered new 7% preferred stock in exchange for their old 6% preferred stock. The bankers who placed the Galesboro preferred stock are given a 5% bonus in new preferred stock for effect-

ing the exchanges. Simpson and Company will purchase this bonus at 80%, so that the bankers can receive a cash commission of 4%. All the preferred stock is exchanged. It absorbs \$262,500 of the preferred stock. There remains, therefore, \$1,014,000 in new bonds and \$487,500 in new preferred stock with which to raise \$1,110,500 in money. The bonds, the entire remainder, are sold to M. U. Harlow and Company who bought the original Galesboro bonds for 85%. This sale gave the promoters \$861,900. The promoters then sold \$300,000 of the preferred stock for 87%. This yielded the company \$261,000. The total money realized from the sale of securities was, therefore, \$1,122,900; ample to meet the actual money requirements.

Some nominal amount of common stock was issued. This was determined by the exigencies of the situation. Suppose an issue of \$3,000,000 was used. On the basis of the past earnings this issue of common stock showed, after fixed and contingent charges, about 3%. The common stock of the Galesboro Company showed earnings of about 8%. The holders of the \$300,000 par value just one fifth interest of Galesboro common stock not held by Stetson and the Simpson firm were offered 2 shares of new common stock for one share of Galesboro, a one fifth interest in the new company. The offer was unanimously accepted. This required the issue of \$600,000 new common stock. The remaining \$2,400,000 was divided equally between Stetson and William Sampson and Company.

FURTHER COMMENT

This particular solution of the problem assumes that a 5% first mortgage, twenty year, public utility bond could be sold to the public at about 90%. This was true in the spring of 1916. It certainly is not true in the spring of 1921. If, therefore, there is no market available for the bonds, they cannot be relied upon to receive a fair share of the cash requirement.

If interest rates are such that new first mortgage bonds cannot be sold except on an 8 or 8½% basis, as in the spring of 1921, some other solution of the problem would have to be adopted.

The course adopted in such a case would depend on the confidence of the promoters in their estimate of the earnings for the year after the improvements were completed, in this case the year ending September 1, 1917, and upon their belief regarding the future course of interest rates. Assuming that they had implicit confidence in their estimates, and believed interest rates were falling, the promoters might wisely secure the necessary money by the issue of 7% two-year notes at 98. The best course in such a case would probably be to secure the refunding of all the underlying bonds, in the manner described in the solution of the problem, and then to hold the remaining \$1,014,000 bonds in the treasury of the new corporation. The promoter would then issue \$1,200,000 8% sec-

ond mortgage two-year notes, junior to the bonds, but senior to the preferred stock. At the end of the two years, provided the promoters estimates of earnings were actually realized, the treasury bonds could be sold to meet part or all the notes. Meantime, too, the increased earnings will make easier the sale of preferred stock held in the treasury.

In case the promoters have not implicit confidence in their prediction of earnings, and if they do not care to assume the risk of the issue of short term notes, then the "block" plan should be used. In such a case the amount of the issue of the common stock should be further increased so that an apparent liberal bonus of common stock may be given away without jeopardizing the control of the promoters and bankers.

REVIEWS OF BUSINESS BOOKS

FACTORY ADMINISTRATION AND COST ACCOUNTS

By Edward T. Elbourne of Messrs. Brindley and Elbourne, Consulting Engineers on Factory Organization and Costing Systems. Longmans, Green and Co.

REVIEWED BY STUART CAMERON McLEOD *

This book is the seventh reprint of the volume "Factory Administration and Accounts," first published in 1914. The original work has been extensively revised to meet the changes in industrial conditions which have occurred during the period since it was first issued.

There are several features of the physical make-up of the book which are worthy of special mention:

1. A system of cross references has been developed throughout the text, so that once the reader has found his particular subject through the index, he is referred automatically by the marginal page references to other pages bearing on the same subject. This method which has not been extensively used in this country has a great deal to recommend it. It enables a reader looking for information on any special topic to cover all the references to the subject and to avoid forming conclusions based upon isolated passages which may not reflect the author's entire thought on the subject.

2. This idea of marginal references is also applied to the many suggestive forms which are presented in the last 150 pages. The Form numbers (F 1, etc.) are quoted in the margin of the text wherever such reference is likely to be useful, and on the pages opposite each illustration cross references are given to the pages in the text where the subject is discussed.

3. The volume is indexed with unusual care. In addition to an exhaustive general index there is a supplementary index of the forms presented.

4. An attempt has been taken to clear up

ambiguity in regard to technical terms used in various industries and students of standardization will find much suggestive material in a glossary of terms which is presented as an appendix. This glossary, while not exhaustive, emphasizes rather strongly the divergence in terminology between English and American practice.

5. The plan of the text is also set forth in a rather elaborate diagram of staff organization and functions similar to the organization charts which have played such a prominent part in industrial organization in this country during recent years. The diagram presents a typical organization for a large manufacturing plant and also serves as a basis for the arrangement of the text material which follows.

The book is divided into seven main sections:

- I. General Administration (63 pp.)
- II. Works Management—Production Control (96 pp.)
- III. Works Management—Labour Administration (102 pp.)
- IV. Works Management—Material Control (56 pp.)
- V. Works Accounting—Administrative Records (100 pp.)
- VI. Works Accounting—Cost Accounts (147 pp.)
- VII. Works Routine—Specimen Forms (157 pp.)

In the section on General Administration the considerations upon which manufacturing policy should be determined are summed up as follows:

1. As to the product for which the factory and plant are efficiently applicable or can be made so, with due regard also to transport facilities and costs.
2. As to present trading conditions and possibilities in such product.

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3. As to what extent standardization will contribute towards conditions of mass production.
4. As to the extent to which specialization on one or more suitable products will lower the costs of production and so make possible reduced selling prices and larger trade.
5. As to the financial requirements for carrying out any contemplated manufacturing policy.
 - (a) Experimental and Development Expenditure as to design of product and methods of manufacture.
 - (b) Additional Buildings and Plant.
 - (c) Tools, Gauges, Jigs, and Fixings (in engineering trades).
 - (d) Raw Material Stocks.
 - (e) Current Production Expenditure—Material, wages, oncosts.
 - (f) Finished Stock.
 - (g) Publicity and Sales Promotion.

In this section the author contributes one more to the already extensive collection of definitions of production efficiency, as follows: "As producing the right goods at the right time, of the right quality, and at the right price." In the hundred odd pages devoted to production control there is considerable material of interest to cost accountants. The subject is treated under the following topics: Buildings and Plant—Selection and Lay-out; Working Drawings and Component Schedules; Foundry Patterns; Production Estimating and Rate-fixing; Tools and Gauges—Provision and Custody; Production Regulation; Foremanship and Inspection.

One omission from this section which will strike the American reader is the absence of any reference to Graphic Production Control as developed in this country during recent years. This section of the text might have been strengthened by graphic illustrations.

The section dealing with labor administration treats the following subjects: Industrial Relations; Government Regulations; Trade Union Agreements; Working Conditions—Hours, Fatigue, Hygiene, Safety; Principles of Remuneration; Selection and Training of Workers; Works Regulation; General Discipline; Social Aspects of Employment.

Extracts of two reports of interest to students of industrial relations are reproduced. These are the Memorandum issued

by the Garton Foundation in October 1916 but privately circulated in May and June 1916, and the reports of the Whitley Committee, of which the first report was issued in March 1917. An agreement in the Engineering Trades relating to Shop Stewards Committees is also given on page 207; and a model constitution of a Works Co-ordination Committee on page 258.

Industrial Relations managers who have felt the pinch of the Volstead Act will be interested to know that "Tea may reasonably be provided by the firm whether any overtime bonus is paid or not."

Under material control the author discusses Purchasing; Stores Organization; Warehouse Organization; Despatch Organization; the latter corresponding to our shipping.

The handling of defective work is always an important managerial problem. The author's plan for "the prompt replacement of defective material and provision for meeting other emergencies, such as customers' demands for replace parts" is to standardize material and to hold reserve stocks in these standard lines sufficient to meet emergencies. In line with American practice, unnecessary duplication of purchase requisitions for the same goods may be avoided by having the storekeeper (in many places in this country, the stock record clerk does it) review requisitions before they are presented to the buyer.

The following passage would indicate that at least some troubles are common to both sides of the Atlantic.

The practice of playing off one competitor against another by disclosing competitive prices, whether partially or wholly, is hardly straightforward, to say the least, and it is very doubtful if the cut obtained in prices by these underhand means is really the smart buying it is vaunted to be, if delivery, quality and future relations are duly taken into account. In certain materials, rings to fix prices have been formed among the manufacturers, though the liberty of reducing the prices on large contracts is sometimes reserved by the members of the ring.

The book is full of ammunition for the advocate of standardized terminology: The author uses the word "stores" as synonymous with "storeroom," whereas in this country "stores" is usually synonymous

with "stock" while the storeroom is a depository for "stores."

The statement, "it is desirable on general grounds that suppliers' invoices should not be sent beyond the works accounts office, however trustworthy the stores staff may be," is somewhat at variance with the practice most favorably considered in this country of having stock record clerks receive copies of invoices so that prices may be entered on stock records where they show quantities as well as values. But with the following procedure in stores organization, few will seriously disagree:

Surplus stock may arise from injudicious purchases in regard to quantities, but more frequently by an altered demand consequent on changes in design.

This latter reason is so prolific in causing surplus stocks that the practice of ordering practically all material only as and when required to meet specific orders has a great deal to recommend it, particularly when associated with the holding of reserve stocks.

There is, however, scope for standardization in regard to goods necessarily held in regular stock.

The importance of the "ordering level," known in this country as the "quantity to order," is emphasized.

Proceeding to the routine incidental to the maintenance of stocks, it will be much more convenient to establish an ordering level in each case rather than to fix the maximum and minimum quantities to be kept in stock. Not only should the ordering level be fixed but also the normal quantity to be ordered, and both must have regard to the time required for obtaining fresh supplies and the liability of the stock becoming exhausted meantime. This arrangement affects all that is intended by the idea of maximum and minimum levels, and is a more readily applied formula.

To the best of my knowledge the following feature of stores organization is not generally observed in the United States:

A development of stores organization having a considerable influence on the stock control routine, is that of dividing the general stores into two sections of "wholesale" and "retail." The division cannot be carried out throughout the whole range of stock, and has most practical advantage in its application to such goods as are in unit form, and are served out in relatively

small quantities. Bolts and fastenings will furnish the bulk of such items.

If the wholesale stock of bolts, etc., is kept in small even parcels suitable for transferring to the "retail" section—whether within the general stores or at a sub-stores—the stock control can be concentrated on the "wholesale" stock and the loose stock held for retailing may be ignored in maintaining the stock.

The successful application of the idea means standardising the running lines, so as to minimise the number of items to be held in the "retail" section.

This is quite an important point under any circumstances, as there is frequently an unnecessary variety of sizes held in stock. Wood screws and files are typical items in which this occurs.

Only the standard running lines would be held in both the "retail" and "wholesale" sections. In the case of non-standard or special lines, the whole of the stock would be held in the "wholesale" section, and obtained as required for issuing.

This being the case, there should be no risk of bad stock actually resulting from there being several retail sections, or sub-stores, nor should any question arise of an excessive margin of stock being necessary to keep the sub-stores going.

Some peculiar accounting problems that arise in connection with special features of material such as returnable packages, repairs, rejections, replacements, sub-stores, fuel, plant supplies, electrical supplies, implements and utensils, timber, component stock, issuances, and return of stock, are well treated.

The last section of the text proper is devoted to a discussion of Works Accounting in two divisions—"Administrative Records," and "Cost Accounts."

The major topics treated under Administrative Records are: Employment Records, Timekeeping, Timebooking, Production Statistics, Wages, Stock Accounts, Stocktaking, Plant Records, Depreciation and Valuation of Buildings and Plant. The chief sections under "Cost Accounts" are: General Principles, Cost Allocation, Standing Orders, Departmental or Intermediate Process Accounts, Stock Production Accounts, Oncosts, Cost Returns.

The treatment of labor accounting is especially extensive. Eight methods of timebooking, i.e., keeping track of the time of labor spent on individual jobs, are outlined. The eighth method, which the

author favors, prescribes that this work shall be done—

By a clerk booking on to job tickets from actual observation in lieu of the foreman or charge hand.

This is a scheme that can meet all requirements of accuracy and relieve both foremen and workmen of clerical work, and having only one distinct disadvantage, viz., the expense, unless on strictly repetition work where a large number of men can be dealt with by one clerk. This condition, moreover, not merely reduces the cost but the same clerk can report day by day any falling off in the quantity of work done by each man, and this might be his most important function.

Under these conditions the clerk becomes a worktaker, and the value of taking up particulars of time worked from this view-point is very far-reaching.

One point in labor accounting frequently ignored is brought out in the following passage:

There is little doubt that no method of abstracting job records for job data purposes from summaries, be they daily or weekly, can compare in usefulness, or even in accuracy, with having the initial record in unit form, that is, a separate record for each job.

In this country one special phase of accounting for labor is known as "short operations." Where jobs consume very little time, time cards are not used. The cost of short operations is ascertained through "tests." These standard costs determined by "tests," are used subsequently in costing work in process; are compared with actual costs, and differences are finally passed through adjustment accounts. This method may be compared with the following suggestion:

There is another variety of ticket necessitated by the short duration of such operations as drilling, and this is merely a composite job ticket for the day's work. If suitably printed, such a ticket can afterwards be cut into strips for each job entered, thus forming separate job tickets. A serviceable compromise, in this connection, is to have a separate ticket each day for each order worked on. This facilitates costing without entailing a multiplicity of tickets.

One section which might have been amplified with profit is the one on "Production Statistics." Production statistics are defined as "Statistics of output expressed in

terms of time, numbers, or plant employed."

From an internal administrative point of view it is not so necessary to go further and express output in terms of monetary value as is the case when information of this character is pooled for trade purposes.

The adoption of an appropriate unit of product is vital to the whole issue of production statistics, and the best solution is likely to lie along the lines of deriving the unit from the staple product, or a product that is important enough to serve for this purpose, and then to convert all variations from the staple product into terms of the latter. The constants adopted for this purpose may not be mathematically correct, but if reasonable judgment and care is used in determining the constants in the first instance, relatively little error will result in the statistics taken as a whole.

It should preferably be a matter for the production estimator to investigate the normal difference in production costs of what *may* be called special product, as compared with the staple product adopted as the standard, and by expressing the difference as a percentage of the standard unit, either above or below, the required constant is derived for converting the special product into terms of staple product.

It is in this direction that the crux lies of reaching any uniformity of either production statistics or production cost in any given trade.

Inasmuch as pay-roll accounting usually has to be done in a hurry the author's suggestion—not new—that "In the making up of the wage sheets (pay-roll sheets) the preparation of the sheets as to names and rates may be undertaken early in the week by copying from the preceding week's sheets," can be followed with profit in any plant.

All cost accountants in this country will not subscribe to the following statement:

For efficient stock control the records of receipts and issues should be kept posted close up to time all day and every day. This condition alone rules out money values on these records because invoices may not be to hand before the goods are issued, and, if they are, the rating of the issues means delay, which must be avoided. It would be possible, no doubt, to do this work, but this would not eliminate the objections mentioned above.

The following arguments may be advanced against this practice: (1) inasmuch as there are usually at least minimum

balances on hand for most items of stock, the prices of which are known, the pricing of requisitions need not wait on the receipt of invoices, especially since the "actual cost method" of pricing requisitions is so widely used; (2) stock record accounting need not be held up because of the non-arrival of invoices since prices can be entered on stock records later when the invoices are received. Annual stocktaking—a form of "stock scrutiny"—is condemned in the following passage:

Flagrant errors will be noted and adjusted too long after their occurrence to prevent repetition, and generally speaking, the annual stocktaking is an altogether unsatisfactory substitute for proper scrutiny throughout the year.

In view of the fact that many firms have been more or less embarrassed by unbalanced inventories during the readjustment period, the author's comments on the "rating" of stock (pricing of material requisitions) will probably be of interest.

There is something to be said for recognising market fluctuations, but the accounting result is apt to be unsatisfactory.

The best compromise is to adjust all stock rates yearly, or, at most, half-yearly, so that such rates shall not exceed the market prices current at the time of valuation, but otherwise the rates used will be the net purchase or cost price. A lump sum reservation or deduction from the annual stock valuation can also be made to cover the risk of unfavourable fluctuations in market values between these valuations.

In using any set of cost figures for tendering purposes, prospective market prices of materials must obviously be allowed for in the tender, whatever may appear in the cost accounts in question, so that there seems no real advantage in attempting the adjustment of stock prices in an endeavor to follow market fluctuations.

Goods purchased during the course of the year will be allocated at the net purchase price, as nearly as possible. . . . Where this procedure is too tedious in view of the advantage gained, the best course is to average the purchase prices over a convenient period and adjust the rate used in the respective stock accounts accordingly.

With regard to doubtful stock, that is, stock of doubtful utility to the particular business concerned, it is much better at the annual stock valuation to make a lump sum deduction on this account, rather than attempt to write down the individual items. Of course, if stock is perma-

nently of reduced value, through deterioration the right course is to reduce the stock rate of such items.

There will be many cases, particularly with component stock, where the prospective utility is in much doubt and yet the stock has not actually deteriorated. It is highly desirable to recognise the risk of the stock never being used, and the lump sum deduction does this without necessitating any adjustment of rates in the stock accounts.

It is not necessary to recognise the deduction in the stock accounts so long as the financial accounts embody it as a contingent reservation. The works manager will be responsible for recommending an adequate sum, probably arrived at as a percentage of the full value.

The result will be that any item in respect to which reservation has been made, will, when used, be charged out at the normal full price, and this is fair because it is evidently worth full value in that instance.

Another interesting point in regard to standardization is the movement for the adoption of the metric system. International relations have emphasized the advantages of the metric system. The following is indicative of the renewed interest taken in this matter:

A matter of moment in connection with stock control records and stock accounts is that of weights and measures. Some consideration has been given to the possible reforms of British weights and measures by various associations, notably the Decimal Association on the one hand, which stands for the adoption of the metric system, and the British Weights and Measures Association, which aims at simplifying the established system by using fewer of the units rather than attempting the herculean task of adopting new units for all trades and all conditions.

One of the most useful parts of the book is the chapter on "Stocktaking" which presents numerous concrete suggestions for inventorying and emphasizes the need of a "program" being worked out in advance of stocktaking.

A detailed table of standing orders for capital expenditures, a "specimen classification," i.e., a list of buildings and fixed plant accounts, accounting treatment and control of capital and repair expenditures, are indicated.

In the chapter on Depreciation and Valuation, the statement is made that the method of recording depreciation on the

percentage of diminishing values is almost universal in England. This is of interest to American accountants who, generally speaking, favor the "straight line" method.

The author indicates the typical British reverence for economic principles in the following passage:

If the depreciation charge for plant bought previous to the War does not sufficiently provide for the fall in the current purchasing power of money, the current production oncosts will be gratuitously lower than those of competitors using plant purchased later—giving a false idea of profit—and the depreciation provision will not be equal to the cost of replacement when that becomes necessary.

On these grounds the easiest method for determining the total sum to be allowed for depreciation under present-day conditions is to recast the nominal book values of plant on the basis of replacement values rather than vary the rate or percentage of depreciation. This procedure will bring book values of pre-war plant on to a common plane with post-war plant.

It is not suggested that the capital values of plant as figuring in the balance sheet need be inflated over the actual cost, because of these conditions, though their value in terms of currency may have increased twofold or more.

This chapter contains sections on the valuation of buildings, fixed plant, and "loose plant" (such as tools, belting, etc.); depreciation rates, and a classification of loose plant accounts. While the author in harmony with the best American practice favors interlocking the cost accounts with the financial (general or commercial) accounts,¹ he makes one suggestion which is not likely to meet with the unanimous agreement of American accountants when he says:

There is one phase of accounting which it is considered more properly belongs to production management than financial management, namely, works or factory accounting, covering in that term the basic administrative records of labour, material and plant and their embodiment in cost accounts. In the absence of a better understanding of the principles and applications of cost accounts by technical managers, it is inevitable that cost accounts should come more usually than not in the category of financial management. With the wider education of those technically responsible for production this common

¹ The manner in which this interlocking is accomplished is illustrated graphically on page 444.

fault and weakness in administrative organisation will be corrected, though it comes much too slowly.

This same idea is further emphasized in a later passage as follows:

The widespread ignorance of the essential principles of cost accounting and the consequent lack of interest by technical managers has usually thrown on the financial department—represented by the company secretary and accountant—the duty of preparing the accounts of works expenditure unaided.

The financial department is necessarily without the technical knowledge or opportunity to do other than accept as accurate whatever administrative records are available or can be obtained and then to apply them to costing purposes as intelligently as possible—limited always by the lack of technical appreciation of the facts which the figures are intended to portray.

In some concerns, the policy is tolerated of the financial department, as such, imposing on the works management a costing system that is aimed at pointing out the path that the works manager shall tread to arrive at greater efficiency. The policy is thoroughly unsound; the solution of works management must come from within and not from without.

Although a clear enough line can be drawn between administrative records and cost accounts, it is entirely desirable to have one official in charge of both—called therefore works accountant rather than cost accountant. The department is consequently referred to in this book as the *works accounts office*, with jurisdiction over timekeeping and wages, rather than as the cost department.

Another interesting reference to the position of the cost accountant in his relation to the general administrative organization which may be studied with considerable profit on this side is contained in the following passage:

The works accounts office becomes an essential element in works management and administration and the expenses attaching thereto should be charged under that head. It serves no good purpose to allow the impression to be formed that the expense of keeping the works accounts is one that can properly be criticised apart from the other administrative and clerical expenses of the works. It is very desirable too, that expenses of this character should be grouped for comparison with the trading margin, or works profit, because that is the criterion of the works success, and if

an increase in administrative expenses can be shown to bring about an increase in works profit, it becomes much easier for the ordinary commercially trained director to appreciate that expenditure to obtain efficient administration pays. He is, however, not unlikely to consider that the credit for increased profits is due to the handling of the commercial side of the business or to trade conditions, and he is likely to be partly right, for slackness of trade, impossible contracts, or a vacillating selling policy will quickly drown all account evidence of works efficiency. This means that the works manager's self-interest is involved in the commercial efficiency of a business, if he has any ambition for the works efficiency to become evident.

The works manager must bear in mind that in striving to achieve works efficiency, he must at the same time have both tact and patience. He must cultivate the means to bring the desirability of his aims and methods before the directors so that they will give him their support willingly and fully. A proper system of works accounts will help his cause under all conditions, though some conditions are very discouraging.

With the works accountant carrying the two-fold duties mentioned above, he should preferably have both technical and accountancy training. This is asking for more than is ordinarily feasible, and aptitude or training in both directions is very unlikely to be possessed by the same person. The conditions, generally, almost compel the appointment of an accountant, and the better his training in his profession, the better works accountant he ought to make. While the works accountant may rarely be a technician, he must necessarily acquire a good deal of trade knowledge; his success will depend largely on his ability to learn much and yet retain a sense of proportion, and not mistake familiarity with manufacturing conditions for technical knowledge.

The author divides cost accounting as a bookkeeping routine into two distinct stages: "Cost Allocation" and "Cost Returns or Summaries." "Cost allocation is, briefly, the dissection of works expenditure according to the respective orders concerned." "Cost Returns are all summaries and abstracts prepared by the works accounts office relative to costs."

The author makes one statement with which I feel impelled to take issue. He says: "The art of costing is essentially one of close approximations rather than the collection of absolute facts." While there may be some basis for this position, I feel that too much emphasis has been given to

this point of view in our cost literature. Cost accounting may not be an absolutely exact science. It may never reach this point. We will always have to contend with variations due to the differences in individual interpretations of cost data. Nevertheless, through modern methods it is possible to attain a high degree of accuracy in cost figures even in the calculation and application of burden. I cannot see where any useful purpose is served in emphasizing a condition which may have been true some years ago but which we have been successful in overcoming to a very marked degree.

The author points out the advantages of a common cost period. He presents arguments for and against the "four weeks period" and the "fortnightly period."

The process of allocating works expenditure, i.e., the entire expenditure pertaining to production is described in detail and also shown graphically—thus enabling the reader to visualize the flow of cost procedure in the shop. The author divides works expenditures (what we call manufacturing cost of production) into three components:

Materials, or Goods.

Disbursements, i.e., Payments, other than wages, for services rendered and contingent liabilities.

Wages.

It is not obvious that this classification is superior to our own general practice.

The author believes that "mechanism" whether it be cards, removable sheets in binders, or bound books should be selected after the general principles of the cost system have been settled. A complete section is devoted to a discussion of the following points in connection with standing orders:

1. Functions.
2. Symbolizing (numbering).
3. Sample code stating items that enter into each standing order.

A convenient method of numbering the standing orders is by the use of hyphen or dash numbers, a group number being followed by a series number, and the combination preceded by a letter symbol, such as:

N for Works Additions
R for Works Repair Expenses
S for Works General Expenses
U for Works Sundry Accounts

It might be noted that this method is not suitable if tabulating machinery is used. Arabic numerals are the only kind of symbols that can be used in conjunction with this equipment.

There is also an entire chapter on Process Accounts with particular reference to the keeping of metal costs and general costs in an iron foundry, brass foundry and smithy, respectively. The elements which enter these accounts appear in a chart. No phase of cost procedure is treated more thoroughly than "Oncosts"—synonymous with our expense or burden or overhead.

The not uncommon attitude of the ordinary business man is that indirect costs or oncosts are only of interest as requiring some mental provision when fixing a selling price. He recognizes well enough that the oncosts must be met, but if the "blend" of business comes out right, he does not mind on what work or classes of work these are recovered.

This reliance on the blend is well enough from a merchant's point of view, for the merchant has a only commercial expenses to provide for, and if he averages these on his turnover, he puts himself in a position to know fairly well what business pays him and what does not. Of course, different lines of business may involve unequal selling expenses, but a shrewd man can tell his real margin of profit near enough for practical purposes as long as he knows what the goods will cost him, and has only to discriminate in regard to his commercial oncosts. In the engineering trades, for instance, these probably average about ten per cent of the turnover.

A manufacturer ought therefore to know what the goods really cost him in the sense that the merchant knows.

This means the separation of commercial oncosts from manufacturing or production oncosts and this differentiation will be found to have a far-reaching effect in the control of both.

There are works today in this country which are overburdened with commercial expenses, and separating the expenses (between manufacturing and commercial) should result in a sounder view of what constitutes manufacturing efficiency.

The author points out that "Oncost" is of two kinds; production and commercial. The steps in handling the former are:

1. To determine the character or nature of expenditure that shall be treated as works expenses, for application as production oncosts.
2. To determine the classification of works expenses best suited to serve production oncost requirements.
3. To determine to what extent the apportionment of works expenses to departments can be based on ascertainable facts.
4. To determine a suitable basis for apportioning works expenses of a general character to the respective departments.
5. To determine the basis for apportioning departmental production oncosts to the respective producing units in each department.
6. To determine on what basis to charge production oncosts to products.
7. To determine to what extent average totals of works expenses shall be used in assessing the respective departments at any time.

Each of these steps is described in detail. Predetermined oncost charges as a basis for charging product that goes through the shop are used. These charges are based on normal output. On this point the author says:

Opinions will differ as to what is to be considered the normal output for a given factory, and, while three-fourths of the factory's full capacity is suggested as a suitable standard, the decision must depend on local factors.

It is interesting to note that this figure corresponds pretty closely to the one used in this country. Some use 70 per cent, more use 80-85 per cent, of full capacity.

All true cost men will be glad to know that the author has not slighted our old friend the question as to whether or not interest on invested capital should be included in manufacturing costs. He offers the following contribution:

In considering production oncosts the question arises as to how to deal with interest charges on capital employed in production.

From the financial account point of view, interest can only be met out of profits, or rather, interest on capital constitutes profit.

To include an interest charge as an element of works expenses is, in a sense, to include an anticipated profit as an expense, which is fundamentally unsound.

There is the other view that if the building and plant were rented, the rent charged and ac-

cepted as an expense, would include interest on the capital value involved, and that it is self-deception to make no charge for rent, when the property is owned by the manufacturer.

Some recognition of the capital values involved in any process is necessary, if the production oncost rates are to be equitable.

In dealing with works expenses as a whole, or by departments, the influence of interest is less disturbing than when fixing the oncost rate for individual producing units.

Taking the instance of a machine of the capital value of £500, interest on that amount at 5 per cent would be £25 per annum.

If the working hours are assumed as being 40 per week for 50 weeks in the year, in other words 2000 hours per annum, the interest charge per hour will work out at 3d. per hour.

Comparing this with another machine, value £50, the interest charge on the same basis would be only 0.3d. per hour—a net difference of 2.7d. per hour for interest alone.

If, however, it is held that it is not admissible to include interest on capital in the financial accounts, an interest charge can be temporarily assumed for cost accounting purposes, and gross individual oncost rates arrived at that will be in excess of the normal rates by the same percentage as the gross expenses (net expenses plus the total interest charges assumed) exceed the net expenses. Thus, if the total capital value of machinery in a department is £5,000, the total interest charge at 5 per cent will be £250 per annum. Supposing the net departmental expenses total to £6,250 per annum, then the gross expenses will be £6,500, or four per cent in excess of the net expenses.

The recommendation is that the gross individual oncost rates, which include the assumed interest charge appropriate to each, shall be reduced to net rates by a flat percentage deduction—in the present illustration of four per cent.

Continuing the illustration, if the gross oncost rate for the £500 machine worked out to be 1s. per hour and for the £50 machine 9d. per hour, the net rates would be 4 per cent less, viz., 11.52d. (say 11½d.) and 8.64d. (say 8¾d.) respectively.

The ratio of the two rates remains unaltered, viz., 4:3, and the more expensive machine is adequately charged without the sum total of production oncosts, as applied by the net rates, being in excess of the net works expenses, as recognized in the financial accounts.

Another near relation of the interest question is treated as follows:

Rent is an expense that would appear to be easily apportioned with accuracy to the respective departments on the basis of floor area oc-

cupied. Under some conditions this would be substantially true, but usually floor area will be no certain index to the proper incidence of the rent when the character and style of buildings vary greatly, and the relative replacement values of the respective buildings may have to be accepted as the only simple alternative.

Again, rates levied by the local authority take cognizance of the plant located in the various buildings, though no uniformity of practice exists as to the method of assessment. Obviously the incidence of the rates on each department does not follow floor areas, even if the rent does, and there is little alternative to adopting a formula based on the relative departmental replacement values of buildings and plant taken together.

As a reasonable compromise both rent and rates can be apportioned on the basis of buildings and plant replacement values taken together.

The chapter on "cost returns" contains the following sections:

1. List of the chief cost returns
 2. "Tying in" of cost and financial accounts
 3. Works cost allocation abstract
 4. Accounts in the manufacturing ledger
 5. Works product abstract
 6. Works account annual abstract
 7. Cost ledger
 8. Routine in balancing cost ledger (also shown graphically)
 9. Outline of typical cases of cost transfers
- There are 143 pages of forms. In regard to forms the author says:

It is important that their educational value should not be hampered by prejudice that the author is making specific recommendations for universal application under all conditions.

One interesting part of the "form section" is the grouping of forms under the headings of officials and departments likely to be interested in them. Sizes of forms are included.

In conclusion it may be said that Mr. Elbourne's volume is worthy of serious examination by American students of cost accounting and industrial management. It is an exhaustive presentation of the English practice in those fields. On most controversial points, both sides of the question are impartially presented. The author has apparently been inspired by a desire to present a complete and exhaustive review of existing practice rather than to advance any particular hobbies of his own.

SUCCEEDING WITH WHAT YOU HAVE

By Charles M. Schwab. 63 pp. The Century Company

REVIEWED BY ELMER ELLSWORTH BROWN*

I think I have never seen another book which puts so much of the wisdom of success into so small a space as this one of Charles M. Schwab entitled, "Succeeding With What You Have."

If success were the whole of Mr. Schwab's philosophy I might not recommend this book without qualification; but I know Mr. Schwab himself is concerned not only with the first step of succeeding with what you have, but also with the second step of making the best use of success when you get it. One has to know his high patriotism and sense of responsibility to his fellowmen to get the whole story that he has to tell.

But the success end of the story is essential, if a man is to have anything to give to his country and to mankind, and this is a success book for Everyman, for it takes the man with whatever endowment the Creator has given him, whether large or small, and shows him the way to make the most of that endowment.

Mr. Schwab thus tells how success is achieved by many men, "*They won out by using normal brains to think beyond their manifest daily duty.*"

Being a college president, I notice with some satisfaction that Mr. Schwab corrects the impression given the public by the press that he is opposed to college education. Says Mr. Schwab:

I am not against a college education. I have never been. Whatever may have been true in the past, there is no doubt that today industrial conditions favor the college man. Old crudities are disappearing; science is dethroning chance. Business is conducted on so vast a scale that the broadening effects of higher education, gained through proper application, write a large figure.

I quite agree with his note of warning:

But the college man who thinks that his greater

learning gives him the privilege of working less hard than the man without such an education is going to wake up in disaster. I regret that some college men enter industry with an inflated notion of their own value. They want to capitalize at once their education, and the time they spent getting it. They feel it is unfair to begin at the bottom, on the same basis with a boy of seventeen or eighteen who has never been to college.

A college man, entering industry, is worth no more to his employer than a common-school or high-school boy, unless he happens to be taking up some position in which higher education is directly applied. Even then he has to adjust himself. Neither knowledge of the classics nor mathematical proficiency can be converted overnight into a marketable commodity.

Mr. Schwab gives a practical hint, in the following anecdote, on how to select men:

Captain Bill knew men. He picked high-grade assistants with marvelous surety.

"Which one of your draftsmen shall we send up to Scotia?" he asked a superintendent.

"Why, any of them will fill the bill, Captain."

"But there must be one more capable than the others," commented Captain Bill; "who is he?"

"I don't know," and the superintendent shook his head; "they are all bright, hustling youngsters."

Captain Bill stood in thought as his keen eyes ran down the red lines of furnaces.

At last he said, "Tell every man to stick on the job until seven o'clock. I'll pick out Scotia's chief for you."

The order was a surprise. It was the slack season, when the draftsmen were not pressed to get through their work in regular hours. But they all kept on cheerfully.

As seven o'clock drew near Captain Bill noticed that the men kept looking up to see how much more time they had to put in. *All save one!* Over in the corner a young man was so absorbed that he seemed to have forgotten there was a clock in the room. When the hour finally came the others hustled for their coats and hats. This chap was still bending over his desk. He was the man whom Captain Bill sent up to Scotia.

* Chancellor of New York University, New York City; United States Commissioner of Education, 1906-1911.

One hardly needs to add that later he became a most valued engineer, a high-salaried man.

I started to read "Succeeding With What You Have" in a spare moment between

engagements but found it so absorbing that I had to read it through to the end. Other readers will probably follow my example in this respect.

LABOR MAINTENANCE

A Practical Handbook of Employees' Service Work. By Daniel Bloomfield, Consultant in Employment Management and Industrial Relations. xvi, 530 pp. The Ronald Press Company

REVIEWED BY CHARLES H. INGERSOLL*

How can the world make the goods that it needs to subsist upon? How can it distribute them equitably so as to give people greater satisfaction and comfort, not only in their lives outside of work but in the very process of earning their living which occupies so large a part of their waking hours?

Square pegs in round holes; unemployment, misunderstanding and hatred between worker and employer, tyranny of the foreman, drifting from job to job by the workman; blind hiring and firing by the employer, untrained workers facing the modern highly organized system of industry uninterested in their work, indifferent employers viewing employees as a part of their machinery, immigrants in strange surroundings, needless sickness, accident and loss of time, inadequate wages, inefficient costly production, squalid houses and lives, hopeless old age—these are some of the symptoms of disease in our present industrial condition, which Mr. Bloomfield in his "Labor Maintenance" recognizes not only as social deterrents, but as obstacles to the efficient conduct of business as it is now constituted. It is in this latter sense that he prescribes for them as hindrances to commercial profit. He would bore from within. He would apply a healing method, initiated by employers, each in his own enterprise, avoid placing men in jobs for which they were not fit, and prevent the numerous other evils which impede the hearty, effective effort of all.

Mr. Bloomfield holds that it is a matter of

good business for each employer to cope with these questions right in his own factory or shop. There is in his book no recognition of the socialist's "class struggle," no suggestion that employers and workers should segregate themselves into associations and unions based upon hostile philosophies.

So far as there is reference to trade unions in "Labor Maintenance," it is friendly and sympathetic, but it forms no part of the "prescription." The author instead, encourages the view that each company or plant be regarded as an entity, toward the success of which a way should be found of enlisting the united effort of all connected with it, whether owners, managers, clerks or shop-workers. "Properly organized service work," he says, "coordinates all efforts of workers and employers in a common program."

He places upon the management the responsibility for initiating the effort both because it will profit by it and because it is in a position to make the first move.

The work as a whole is a handbook on the employer's opportunity and his method of cultivating wholesome progressive relations with all of his employees. It summarizes nearly all that has been evolved in the various branches of this subject, especially during and since the war. It furnishes not only the principles which have been wrought out of many experiences by many companies, but gives also a wealth of statistical information upon which the principles frequently are based, and details of exact use.

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After drawing attention to the modern need for the conservation of labor, the author points to the unquestioned waste suffered by most employers through unnecessary labor "turnover," i.e., the rapid changes in the personnel of the working force through the comings and goings of laborers. The loss involved in the railroad industry based upon figures of the Southern Pacific is estimated at \$27,000,000 per year for the country, because it is necessary to engage 2,700,000 men to maintain a force of 1,800,000 men. The Ford Company, which had formerly had a high loss through labor turnover, was able after installing a competent employment department in 1916, to reduce this wastage to about one-seventh of its former proportions. Many other instances are cited.

The solution of the problem of labor turnover according to Mr. Bloomfield, is to apply care and intelligence to the selection and placing of employees so that they will not only be capable of doing the work they are set to do, but will find it agreeable and suited to their talents. Thus both the need of discharging and the tendency to "quit the job" will be minimized.

How to establish a department to care for this and allied problems, what its functions and duties should be, pitfalls to be avoided and the relationship of the department to the business as a whole, are set forth informatively.

Right here, however, we come upon prerequisites without which the rest of the program expounded is well-nigh purposeless, and it should be understood that the work as a whole is in reality a philosophy, and a program of many phases, designed in its entirety as a practical system of industrial relations.

"Proper working conditions are the basis of successful labor management and maintenance," says Mr. Bloomfield. By this he means "sanitary arrangements, conditions of heat, light, ventilation, safety and health."

Next he states that "wages must be fair." Again a "fair wage is the starting point of service work, the keystone of a sound industrial structure."

Warning is given against the so-called "welfare work" which has frequently been

undertaken on behalf of employees without these prerequisite conditions and which has consequently reacted unfavorably because the employee has felt that there was paternalism in it and that he was himself paying for the welfare effort through a subnormal pay envelope.

Similarly, the author sets forth that "no service work is worthy of the name if it does not encourage self-directed activities." Indeed, this thought might almost be taken as the central theme of the book. He says:

Properly administered, service work promotes self-respect, develops the worker's initiative and encourages democratic effort and co-operation. . . . It directs the energies of workers along avenues of wholesome growth, thereby making employment a common enterprise, rather than a case of master and servant. It increases the workers' personal and industrial efficiency by intelligent assistance to them in their problems.

Besides the reduction of labor turnover by the measures already mentioned, the employment department would be charged with the duties of analyzing every job and appraising its requirements in terms of the experience, training, talents, physical qualifications, and temperament of the candidate who is to fill it. It would have charge of promoting and transferring employees, none could be discharged without being referred back to the department for examination into the causes and for possible placement in another job. It would hear reports of grievances from workers, study wages, living costs, and wage adjustments, and perform numerous other functions. If the company were not a large one, the department would also assume duties which in larger plants are recommended for other departments of the division having responsibility for industrial relations. These include such matters as health, safety promotion, education, housing, and social and special activities.

Much valuable suggestion is given under each of these heads, together with methods actually in use and the results achieved.

Especially inspiring are the chapters on training and educational possibilities, the enlistment of a plant or institutional spirit throughout the rank and file, and the opportunity for thrift and savings associa-

tions, and promotion of community activities springing from the plant as a center.

Taken as a whole, "Labor Maintenance" presents a plan which if approximately realized in any large proportion of the industrial enterprises of our country, would go a long way toward mitigating our social, economic, and even our political ills.

Goods would be produced better and cheaper. Living costs would go down. Standards of comfort would go up. Unemployment, strikes, lost time, sickness, unpleasant working conditions, ineffective effort, would be minimized. Interest would be keener, the joy of work greater, and old age more secure. Friction and hatred would be less.

Naturally, such sweeping improvements cannot be expected without great effort, patience, disappointment, and delay.

The prospect, in view of the evidence of results already achieved, appears attain-

able, but in an undertaking so involved with the human element and wherein suspicion must be allayed, good-will cultivated, tact, faith, and patience exercised, it would contradict history to expect a rapid general realization of the new estate.

The movement rests for its initiative upon the employer. It requires from him a preliminary investment of funds in anticipation of profitable results. Only vision and faith in the common man can prompt the undertaking. Only those will succeed at it who go in with more than good impulse and deep sincerity, for, as the author warns us, it takes also determination and great good sense.

But none of these considerations need deter the man who is prepared to go rightly into the effort, from reaping his rewards before those of smaller faith have seen the light.

The book is amply worth a reading by any employer or manager of men.

A SHORT COURSE IN ADVERTISING

By Alex F. Osborn, Vice-President of Barton, Durstine, and Osborn, Advertising Agency. With an Introduction by MacMartin, Chairman of the Agency Service Committee of the American Association of Advertising Agencies. xiii, 248 pp. Charles Scribner's Sons

REVIEWED BY ALFRED LIEF*

• Informative as this volume is, it does not treat the subject thoroughly. Nor is it intended to be more than a cursory survey. The value of Mr. Osborn's clearly written textbook consists in its presentation of the basic facts of successful advertising.

The subtopic of copy, for example, is covered in two short chapters. We are told that copy must be simple and human and should possess the "you" attitude; that it should suggest rather than bluntly declare, and should appeal to the senses rather than to the intellect. These are commonly accepted beliefs, and the beginner who learns them from Mr. Osborn's concise exposition will fare well. But it will give him no more than a starting point.

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Similarly color and typography are touched upon, although marketing and media receive fuller treatment. Campaigns and retail advertising comprise the rest of the contents.

More valuable than the text pages are the 26 full-page plates contrasting the current ads with those ads of the same product put out in the year 1900. From these object lessons, if carefully studied, the reader can profit more than from a five-foot shelf of theorizing verbiage. An examination of these and other specimens could provide an excellent, practical book in itself, marking the differences between advertising in its infancy and in its present adolescence.

Simplicity in construction, attractiveness in layout, personal tone instead of freakish-

ness, sincerity in place of cleverness—these are the outstanding changes. In bygone days the product's name was featured, and a few generalities completed the ad. Nowadays the tendency is to emphasize service, find the quality that meets the consumer's strongest need and play it up. This practice entails a suppression of the "I" element and a necessity for research. The author points out that many advertisers are eliminating name-emphasis for either of the two following reasons:

(a) The reader will see the name and assume that he knows all about the product. This reader is lost. (b) The reader may have a preconceived dislike for the product and upon seeing the name ahead of the message will pass on to the next page. This reader is also lost.

The author classifies advertising into name-advertising and persuasive-advertising. Admitting that each has its merits, he prefers the latter for by this method "good will, instead of being the mere knowledge of a name, may become a public conviction." This is true; an echo is empty if it carries no idea.

Quaker Oats used to be pushed through name-publicity. Emphasis of the trade-name was the backbone of the advertising. Why not? It sounded reasonable. Every family used oats. All that seemed necessary was to shout the name "Quaker" loud enough and often enough. But the plan shifted, and today Quaker products occupy more than a million dollars' worth of space each year in magazine advertisements which explain in pictures and words just why and how Quaker products are cheaper and better than other competitive foodstuffs. That is but one of the many instances where persuasive-advertising has been finally preferred. Under the old method the name occupied 90 per cent of the space. Under the new, the name takes only a small fraction; but still it is so prominent that if you but glance at a Quaker Oats ad you will see the trade-name. Above all, you will receive that suggestion, that "reason-why" which *persuades* as well as reminds.

In fact, competition has necessitated more and better persuasive-advertising. In the old days, if you painted the name of your soap on elephants' backs, on barn roofs, on flat rocks and wooden fences, you were a great advertiser. But what chance would soap so advertised have now against Lux, and Woodbury's, and Ivory, and the other brands which make such intriguing and persuasive "reason-why" appeals? Many

products are known by name, many products are on the lips of the millions—so many, that if yours is not in the heart, as well as on the lips of the consumer, it will not be bought.

The other fact brought out by the comparison of ads, namely, the need for research, is reiterated throughout the book. Research is coming to the fore as a factor indispensable to intelligent activity. What features of your product are worth talking about? What qualities of the prospect can be appealed to? What medium will best carry those features to those qualities of the prospect?

Questionnaires are involved here, personal investigations, utilization of available statistics. There may not be a sufficient number of potential consumers to warrant your engaging in a particular business, or in charging a certain price. Or the possible purchasers are not reached by your advertising. Or you are not advertising the merit for which your product is most strongly demanded. Research is not a panacea but it is an A-1 preventive.

When the thermos bottle was first put on the market the promoter's idea was that this novelty would be a great accessory to the picnics of the wealthy. As it developed, a tremendous market existed among the factory workers who wanted to take a warm drink to work with them for use at the noon-hour. This discovery gave a wholly different aspect to the marketing problem. Instead of the prospects being a comparative handful of wealthy people, the circle of possible buyers included millions of wage-earners. As a result the entire advertising method underwent a transformation. Increased demand brought increased production, which made it possible to lower the price so as to bring it within reach of the greatest possible number of buyers.

Such has been the history of many a marketing problem. Experience has brought out new facts which have changed the entire plan and have often resulted in an expansion of the market and a decrease in the price. A knowledge of statistics and an analysis of conditions will often go a great way to save part of the expense which a change of plan always involves.

Mr. Osborn gives an admirable chart which classifies products as luxuries, half-necessities, and necessities, and lists under each classification the ways to win the prospect, including the media to use. Distribution and the method of distribution

are factors in the selection of media, and another factor is the size of the appropriation. Media, like copy, depend on the general analysis of the product and the prospect.

First pick to pieces the main elements of appeal that the product itself possesses and the main elements of the prospect's susceptibilities to which those points of appeal can best be directed. Then, almost automatically, the question of media will decide itself.

That the author repeats himself is evident and it is significant. It means he has a message and is hammering it in by the ground old advertising principle of repetition.

Much space is devoted to the retailer's problems and the manufacturer's share in them. A good idea suggested is to make the dealer do something costless for you so

that it will be easier to get him to do something bigger, i.e., send an order. Here again is a principle often practiced in copy. In this case, before a new toilet preparation was marketed, the makers, undecided as to the cardinal quality, canvassed the retailers. Of the 68 per cent that replied practically all agreed. The chief talking point was thus decided upon and moreover the dealers were aroused into keen interest in the article before it was offered to them. Plenty of practical illustrations like this make the book instructive and also convincing.

"A Short Course in Advertising" will not turn the industrial executive, the office controller, or even the head accountant into an expert; but when advertising and marketing problems arise he will be better able to understand them.

A COUNTING-HOUSE DICTIONARY

By John White Kuhrt, B. Sc. 340 pp. George Routledge and Sons Limited, London. American Agents, E. P. Dutton and Co.

REVIEWED BY THOMAS YORK*

While the financial systems in the various countries are necessarily constructed on the same fundamental lines they differ from each other in many details, and the result is a more or less distinctive financial nomenclature in each country. "The Counting-House Dictionary" undertakes to define the words in the technical language of the British banker, financier, and merchant. While primarily intended for the Englishman's consumption, it should nevertheless make a useful book of reference for the American banker and student of banking. Many of the terms it contains are common to both countries. But it should make its strongest appeal to the American financial public because of the very fact that it does explain the features of the British financial structure.

New York and London are so closely

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bound together in their financial relations that it would almost seem essential for the bankers of one city to know the methods and practices of the other. The study of foreign financial centers in connection with the establishment of the Federal Reserve System, and the wide discussion provoked by the general disruption of the banking machinery of the world since 1914, have made Americans better acquainted with London's way of doing its financial business. There is, however, still much room for further enlightenment and it is just such thorough works as the present one that will help materially to dispel the ignorance.

It has probably been the experience of many an American reader of British financial papers and periodicals, of being unable to account satisfactorily for certain peculiarities of British methods. The books that have been published on British banking and finance, or on the London Stock

Exchange, have treated their subject in too general a way for his purpose. They have attempted to make as broad an appeal as possible by preserving the human element in so far as they could. These books naturally serve their purpose, but it has been more or less at the sacrifice of technical details, which while not of any particular interest, usually are at times needed and needed badly.

It is, therefore, a great satisfaction to be able to turn readily to the page of a book where there is found, for example, a complete and exact definition of the British debenture; at times inaccurately described by American writers on investments. Those who are wont to scan the weekly statement of the Bank of England have no doubt frequently felt a curiosity to know precisely what the item "Seven Day and other Bills" referred to. This the Dictionary explains in full, even going to the length of giving the form of this particular type of bill.

Probably few Americans outside of the handful of security arbitrageurs know precisely why, before the war, the length of the account for which securities were dealt in on the London Stock Exchange varied from 14 to 19 days, and in very exceptional cases to 21 days. The reason can be found under the term "Settlement" in the book.

Not the least valuable feature of the volume is that it gives the French and German equivalents of the English terms. This will be appreciated by those who have attempted to read French and German financial articles with the aid of the ordinary lexicons.

There is also much historical matter bearing particularly on British banking, currency, and coins. The financial upheaval caused by the war has brought about many changes in British banking and currency. These are all noted and given full explanation. The book is in fact a thoroughly up-to-date work.

While the volume appears to have all the earmarks of great pains having been taken to insure accuracy, a few inaccuracies nevertheless occur. The author is mistaken, in stating for example, that on all four occasions when the Bank Charter Act of 1844 was suspended, except the present one, the bank availed itself of the suspension.

As a matter of fact, the suspension was only nominally in force on all but one occasion; in 1857, if the reviewer's memory serves him correctly.

Another inaccuracy is found in the explanation of parities for security prices between New York and London. The author ascribes the discrepancy of the prices to the fact that the American dollar is in this connection taken to be equivalent to 4 shillings. This fictitious dollar is only concerned with the peculiar method of quoting most American dollar securities on the London Stock Exchange as percentages of a convenient but arbitrary par, instead of in pounds sterling, and is not an essential factor determining the parities. A few American stocks, including several mining issues are quoted in London in pounds sterling, and here the fictitious dollar plays no part whatever in fixing the parities. The only essential elements entering into the fixation of the parities are the rate of exchange, the interest rate, and the various charges incurred in purchasing or selling stocks in New York and London, and in transferring them between the two centers.

Not only is the Dictionary highly informative, but it is also written in a very readable style. Many a passage is relieved with one or more well-turned quips made at the expense of British officialdom and others.

The explanation of the British customs service contains the following thrusts:

In the south-east corner of the City, and throughout the length and breadth of dockland, the Customs is a power to be reckoned with, sometimes beneficent but always despotic, as becomes a Government Department. . . .

Elsewhere on the building are such aids to commerce as, for example, the Statistical Department, which besides preparing returns for blue-book purposes, exercises a sort of leisurely check on the various forms lodged by importers and shippers; if a form is missing, they seek diligently—but not hastily—till somebody else finds it. . . .

Like their confreres at Somerset House, who want the Income Tax raised to 10s. to simplify their calculations, the officials of the Customs are more concerned with their routine than with the interests of the trading communities; they live in a world of forms—forms of all colours, sizes and degrees of complication, forms for paying duty, forms for claiming rebates or duty over-

paid, forms permitting the withdrawal of dutiable goods for export, entry bills, specifications for free goods exported, and so on. . . .

The American reader will doubtless turn first to the definition of the dollar and of the cent. These two terms the book defines as follows:

Dollar. A name given to certain currency units in various countries, but if used without qualification always understood to refer to the United States Dollar. The sign (\$) now so generally used to signify a dollar is commonly supposed to date from the time of the celebrated Pillar Dollar of Spain. This dollar was known as the Piece of Eight (meaning eight reals), and the curved portion of the sign is a rude representa-

tion of the figure 8. The two vertical strokes are thought to be emblematical of the Pillars of Hercules which were stamped on the coin itself.

Cent. A word of very common occurrence in connection with business transactions. In some cases it has the meaning of hundred, in others, of hundredth. Thus, the universal phrase "per cent." means simply per hundred (also written per centum and %). The French equivalent is *pour cent*, and the German *pro cent*.

In its second meaning of hundredth, the cent, as all the world knows, is one hundredth part of the Almighty Dollar. Incidentally, the hundredth part of a Dutch guilder is also called a cent, as the Yankee tourist will quickly discover when he gets within hearing of the picturesque but somewhat mendacious children by the side of the *Zuyder Zee*!

TRADE TESTS

By J. Crosby Chapman, B.A., Ph.D., Associate Professor of Educational Psychology in Yale University, etc. 435 pp. Henry Holt and Company

REVIEWED BY THOMAS CONYNGTON*

This work by Dr. J. Crosby Chapman explains its reason for being as follows:

At a time when the human resources of the country were taxed to the uttermost, the War Department, to meet the problem of placement of its skilled personnel, undertook extensive researches. One of the important outgrowths of this experimentation was the Trade Test. This instrument was devised and constructed to make it possible for a trained examiner, unskilled in any particular trade, to measure in objective terms the trade standing of any recruit claiming skill in any of the several hundred trades necessary to the work of the army.

He gives a picture of the tremendous difficulty at the outbreak of the war in placing men in the army in the right places. It was at that time incumbent upon the army to use the knowledge and skill of each man to the best advantage possible, for the industrial situation was such that the number of skilled men the army could call upon was strictly limited. This exigency forced a crisis which called into existence a new method of attacking an old problem. The

army within itself and for its own special purpose required men of all degrees of skill in a number of fairly definite occupations. To train new men when skilled men were already in the army would have involved great waste and delay. To train men to do general automobile repairs while first-rate auto mechanics were digging trenches was obviously ridiculous. Yet this was inevitable until some ready method was devised to find the trained men already in the army. The most obvious method of getting information was by interviewing each recruit and making a notation on his card, which listed his previous occupation. Unfortunately many men who had no trade experience claimed to be experts, while others underestimated their work, making the records so obtained of little value. When these men were assigned to positions and shipped to France, they failed repeatedly when confronted with the duties in which they had claimed skill. Under these circumstances it was necessary to devise some form of trade test that could be readily applied even by one not familiar with the particular trade for which the

* President of the Ronald Press Company, New York City.

examination was given, and which would furnish sufficiently accurate information to avoid making gross and disastrous errors in assignments.

It was necessary that the methods used should answer to the following requirements.

1. The methods used must be applicable to all trades.

2. The methods must be such that they can be employed by an intelligent examiner who has no personal knowledge of the trade.

3. The methods must yield a rating of a man which is independent of the examiners' individual judgment, in other words, the test must be objective and not subjective.

4. The methods must be rapid, and in most cases must not require the use of tools or apparatus.

To meet these very exacting requirements the so-called trade tests were devised. The general theme of this whole book sufficiently answers the question of "What is a Trade Test?"

Essentially the trade test is a measuring rod which can be used without trade knowledge on the part of the examiner to record quickly and accurately the degree of trade ability of the person who is being examined. At first sight it would seem to be a theoretical and impossible idea that tests could be devised that would be satisfactory when applied by examiners who were not familiar with the trade. That this difficulty was overcome and that trade tests were devised which were eminently successful in practice, this book clearly shows.

Dr. Chapman outlines the course by which these trade tests were devised. He

shows how carefully and scientifically they were worked out and how effectively they were used. He says:

The way in which these methods were evolved from physics and psychology and applied to these particular problems cannot be treated here. The field of educational measurements made the maximum contribution. In fact the trade test movement is virtually the story of the refinement of the ordinary selective methods of industry by application of the statistical and other devices which have grown up largely within the realm of educational measurements.

The chapters of the book deal in due order with the following descriptions of trade tests:

1. Oral trade test methods
2. Picture trade test methods
3. Performance trade test methods
4. Written trade test methods.

It is much to be regretted that space will not allow us to go more fully into this subject. It must suffice to say that Dr. Chapman's work clearly and logically explains and justifies the use of the trade test and that these trade tests as given in the book for a large number of the ordinary occupations, such as electricians, plumbers, printers, bricklayers, automobile mechanics, blacksmiths, machinists, and many others, will convince any reader that they have great practical value in testing applicants under any circumstances in such trades. The book will be of real utility to all personnel managers, employment agencies, and others who are studying the problems relating to the satisfactory employment and placing of men in modern industries.

THE FINANCIAL ORGANIZATION OF SOCIETY

By Harold Glenn Moulton, Associate Professor of Political Economy in the University of Chicago. xxii, 789 pp. The University of Chicago Press

REVIEWED BY WILLIAM A. SCOTT*

Among present-day problems those which appropriately may be classed as financial, rank high both from the standpoint of dif-

ficulty and from that of importance. Business men in particular are concerned with them and perplexed by them. They also find it difficult properly to inform themselves concerning them. There are

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books in abundance, and good ones too, and financial and other periodicals teem with articles, some of them written for their especial benefit, but few of these exactly meet their needs.

A very intelligent business man the other day confessed that in spite of efforts to enlighten himself, quotations of foreign exchange rates and discussions concerning them meant about as much to him as a Chinese laundry ticket.

What such a man lacks and sorely needs is a clear understanding of the nature and functions of a large number of financial institutions, of their relations to each other, and of the working of the financial mechanism as a whole. The books and articles he reads either give him glimpses of parts only of the machinery or assume a knowledge of the entire mechanism, which he does not possess.

To such a man Professor Moulton's book should be very welcome. In the words of the author it

is designed to serve as the basis of a general survey course in finance and to enable the general reader to obtain a clear understanding of the nature of the modern financial system, and of the economic functions performed by each of the numerous financial institutions—investment banks, stock exchanges, commercial banks, trust companies, savings institutions, commercial paper houses, discount companies, Federal Reserve and Federal Farm Loan institutions, etc.—which together comprise this system.

At the outset the author emphasizes the fact that our present-day complex social and industrial system is organized on the basis of a pecuniary unit, in this country called the dollar, in England the pound sterling, in France the franc, etc., etc. He explains the relation and significance of this fact to business administration, family expenditures, social maladjustments and economic and social standards. He explains in untechnical and easily understood language the nature and functions of money, the composition of our currency and the regulations pertaining to it. He follows this with an illuminating chapter on the foreign exchanges and with one on the nature and various forms of credit. Then comes a description of the various institutions which constitute our credit system,

the special functions of each, and their relations to each other and to the supply of business men and corporations with fixed and circulating capital. Then follow chapters on "Financial Integration" and on "The Financial System and the General Economic Organization" in which the operation of the entire financial mechanism, its merits and defects, its relation to the other parts of our modern economic organization, and its international aspects, are described.

The material is well organized and clearly presented. The style is interesting and pleasing. Controverted and difficult points of theory are for the most part omitted and, when they are discussed, the author is fair-minded and moderate in the expression of his own views and tolerant of the views of others.

There are a few errors and some loose statements which are liable to misconstruction as, for example, when he gives 1776 as the date of the death of Adam Smith; when he implies that it is the *value* of the gold in the dollar and the English pound sterling respectively instead of the *weight* that fixes the par between the units of value of these two countries; when he says that "preferred stock has a prior claim on dividends in the event of liquidation"; that note issues in the United States are confined to national banks; that "the mortgage pledges the property owned by the corporation as a security for the payment of interest on the bond"; and that "all the states have incorporated in their banking laws the principle of the double liability of stockholders." In most of these cases the context and other statements set the readers right and in no case do these slips vitiate the fundamentals of the discussion.

The book is designed primarily as a guide or text for college and university students, especially in schools of Commerce and Business Administration, and on this account is equipped with lists of "Questions for Discussion" and "References for Further Reading." The latter will serve the general reader as well as the student and the former will not in any respect detract from its usefulness to him. It is also designed as an introduction to a number of specialized courses in finance and on this

account does not treat many topics as fully as the general reader may desire or distribute the emphasis according to his needs. Certain topics, however, notably the Federal Reserve System, are treated as fully as could be desired.

There is room for differences of opinion regarding the relative amount of space devoted to the major topics even from the point of view of the student in an introductory course and also regarding the question

whether an introductory course should be a general survey of the kind presented in this book. In his introductory chapter the author ably defends his plan, but there are practical and pedagogical difficulties which will prevent its adoption by many teachers. It should also be said that this book is one of a series published by the University of Chicago in pursuance of an experiment "looking toward the organization of the business curriculum into a coherent whole."

DIE ENTSTEHUNG DER VOLKSWIRTSCHAFT

By Karl Bücher. Sometime Professor of Statistics at Dorpat University and now Professor of Political Economy at the University of Leipzig. Erste Sammlung. viii 475 pp. Tübingen.

REVIEWED BY FREDERICK K. MELVIN*

The business executive who wants a historical background for industry can find no better work than this one by Professor Bücher. For years it has been a standard authority and has been kept up to date by numerous revisions. The present one is number thirteen and contains several chapters not found in earlier editions.

The first chapter outlines in detail the economic conditions found among primitive people. For the material in this chapter, Professor Bücher has literally gone to the four corners of the globe. Of special interest to the American reader is the description of political economy found among the Indians, not only in North America, but also in the sister continent to the South.

The second chapter is, in a certain sense, a continuation of the first. It deals for the most part with the domestic economy of these same primitive people. Professor Bücher points out how the economic necessities of the primitive home were met by a peculiar division of labor between the sexes. To the woman-folk was assigned the production of vegetable foods and to the man-folk the manufacture of weapons for securing animal food. Such a system becomes a sort of dualism in domestic economy.

The third chapter, the title of which Professor Bücher has given to the entire work, takes up in four divisions what might be called the steps in industrial evolution.

The fourth chapter is one of the most interesting of all and is also probably the most valuable to the American reader. Complete in itself, it is a historical résumé of industrial systems.

Given in the order of development, they are:

1. The Housework (*Das Hauswerk*)
2. The Wagework (*Das Lohnwerk*)
3. The Handwork (*Das Handwerk*)
4. The House Industry (*Hausindustrie*)
5. The Industrial Plant (*Die Fabrik*)

Of these five principle systems, the first considers production "in and for the house" from materials furnished by the household. The second has two subdivisions. In one the wage-worker goes to the raw material and literally boards with his customer until the work is done. In the other he has his own workshop and the raw material is brought to him. In the latter case, he receives a certain amount of the material for his wages. This system is best illustrated in America by "custom grinding"—a term still seen on the old mills of New England.

* Economist and Statistician.

In the mountains of Switzerland, the peasant craftsman is often a nomad worker who goes from one farmhouse to another. In many of these farmhouses there is a special bedroom reserved for this peripatetic worker. In the case of home work, the owner of the local plant is the director of production for the work done for his customers. Gradually this director furnishes material and as a result we have handicraft—as that term is commonly understood today.

Professor Bücher points out that in Europe the peripatetic worker disappears with the appearance of guilds. In the industrial plants capital, in the modern sense, assumes the entire burden of manufacture. Its chief advantage is that it takes away from the worker some of the fear of non-employment.

Professor Bücher views with "alarm" the fact that factory production displaces so many small independent workers and

substitutes a mass of dependent and often discontented laborers. In fact he devotes one entire chapter to the growth of towns in population due to a flocking of the peasants to industrial centers.

Another chapter deals with the origin of social classes as a result of a division of labor in industry.

This work is one of the finest products of German scholarship. Yet one notices several errors of credit which should be corrected by the time a book has reached its thirteenth edition. In the chapter, "Die Anfänge des Zeitungswesens" one notices (page 238) that "Die periodische Presse" is set down as published in 1845 when the year was 1875; the volume of "Bibliothek des literarischen Vereins" is not LXI (page 251) but CXI; in Hudson's book the years in the title are 1690-1870 and not 1690-1830 as Professor Bücher says. Even the best of German scholars make careless slips.

BOOKS RECEIVED

Elements of Bond Investment. By A. M. Sakolski, Bond Expert, Equitable Trust Company of New York; Formerly Lecturer and Instructor on Corporation Finance and Economics, Johns Hopkins University, New York University, and Union College. 158 pp. The Ronald Press Company.

Great American Issues—Political, Social, Economic. By John Hays Hammond and Jeremiah W. Jenks. XI, 274 pp. Charles Scribner's Sons.

While Europe Waits for Peace. Pierrepont B. Noyes, American Rhineland Commissioner from April 1919, to June 1920. 99 pp. Macmillan Company.

E. I. du Pont de Nemours and Company. By Mrs. B. G. du Pont. 196 pp. Houghton Mifflin Company.

Wealth—Its Production and Distribution. By A. W. Kirkaldy, B. Litt., Oxford, Professor of Economics and Commerce, University College, Nottingham. 147 pp. E. P. Dutton and Company.

Human Engineering—A Study of the Management of Human Forces in Industry. By Eugene Wera, Industrial Engineer. XV, 378 pp. D. Appleton and Company.

Trade Associations—Their Organization and Management. By Emmett Hay Naylor. Secretary-Treasurer of the Book Paper, Cover Paper, Tissue Paper, and Writing Paper Manufacturers Associations; President, The American Trade Association Executives. XV, 389 pp. The Ronald Press Company.

United States Steel—A Corporation with a Soul. By Arundel Cotter. X, 312 pp. Doubleday, Page and Company.

Exporting to the World. By A. A. Preciado, Former Director of the United States Government Committee in Republic of Chile. XVII, 430 pp. The James A. McCann Company.

Statistics in Business—Their Analysis, Charting and Use. By Horace Secrist, Professor of Economics and Statistics, Northwestern University and Director of the Bureau of Business Research, Northwestern University School of Commerce. 137 pp. McGraw-Hill Book Company.

Acceptances—Trade and Bankers. By Park Mathewson, Counselor on Business, Finance Management; Vice-President, The Business Bourse, New York. Introduction by William Walker Orr, Assistant Secretary, National Association of Credit Men. XIV, 372 pp. D. Appleton and Company.

REVIEWS OF BUSINESS PAMPHLETS

Labor Terminology. Bureau of Business Research, Graduate School of Business Administration, Harvard University, Cambridge, Mass.

This bulletin probably the first dictionary of labor terms as used by organized labor ever published, has just been put out by the Harvard Bureau of Business Research. Its object is to provide a means of lessening the verbal misunderstandings which often cause or prolong disputes between employers and employees.

The bulletin contains definitions from the labor standpoint of several hundred terms, many of which, such as "open shop," "collective bargaining," and "union shop," are frequently used with different meanings by parties to labor controversies.

This effort to define what labor men mean when they use terms has been made for the purpose of enabling manufacturers and employers to secure a better understanding of the point of view of their men.

Melvin T. Copeland, Director of the Bureau of Business Research, states that the bulletin will be used at the Harvard Graduate School of Business Administration in the courses which deal with labor relations.

The bulletin is prepared primarily for employers because many terms are the subject of controversy and the need was felt of a means by which the employer might more quickly find out what the employee, and particularly the organized employee, means when he uses a term often used by the employer in another sense.

An open shop is thus defined from the labor point of view as "a plant in which both union and non-union labor is employed without discrimination," while "collective bargaining," the definition of which was a subject of controversy at the Industrial Conference at Washington, is said to mean "the negotiation of a trade agreement between one or more employers and one or more groups of employees acting collectively through representatives chosen by the respective parties."

† The following explanatory statement appears along with the definition of "collective bargaining":

The term collective bargaining occasionally is applied to negotiations between an employer and representatives of the employees in his plant who are organized, usually under a shop committee system, with no outside affiliations. By labor union members, the term is applied only to negotiations between one or more employers and representatives of a local or national labor union who may or may not be employed in the plant affected.

Bankers Acceptances as an Investment. By Morton H. Fry, American Acceptance Council, 111 Broadway, New York City.

Mr. Fry, in his brief foreword, frankly states that his pamphlet is especially addressed to those investors—corporations or individuals—who have not yet been buyers of acceptances or who have bought only sporadically and to whom the inherent advantages possessed by such acceptances should appeal.

He gives the following three general tests to apply to any short-term investment:

1. Is it safe? Is there reasonable assurance of the return of principal at maturity with interest for the period the funds have been invested?
2. Is it liquid? In the event of funds being required prior to maturity can the security be turned into cash readily and without substantial loss?
3. Can the securities be obtained in desired denominations and maturities?

In the opinion of the author bank acceptances combine to an unusual extent the three requisites—safety, liquidity, and convenient maturity. He then proceeds to discuss somewhat in detail these three requisites.

A valuable feature of this brochure is the brief discussion of how to buy bills and how to sell bills. Attention is called to the fact that the bank acceptance, though a comparatively new instrument of credit in America, has stood the test, not only of the war period, but also of the post-war period, and how it is today more firmly established than ever in the older financial markets.

The pamphlet concludes with an extract from a report of Frank L. Palmer, Bank Commissioner of the state of Maine, and a

statement from George McLaughlin, Superintendent of Banks, state of New York.

Copies of "Bankers Acceptances as an Investment" may be obtained singly or in quantity on application to The Executive Offices of The American Acceptance Council.

How Directors Should Examine Their Bank.

By O. W. Birkhead, Secretary to The Comptroller of Currency and Formerly Chief, Division of Examinations Comptroller's Office. A. S. Pratt and Sons, Inc., Wilkins, Bldg., Washington, D. C.

Because many business executives are directors of banks and of trusts, this booklet should, to use an overworked phrase, fill a long-felt want.

At the very outset, Mr. Birkhead emphasizes these two pivotal parts of every examination: first, the appraisal or valuing of the assets; second, proof of the actual existence and legal custody by the bank of all assets called for by the general books. To put it in other words, the author says that an examination should answer this question, "Has the bank the actual legal title to all assets called for by the books and are those assets worth today book value; if not, what depreciation has occurred?"

The different accounts which should be examined are discussed and often practical suggestions are given. Attention is called to the great legal responsibilities of business executives who are directors of banks. Suggestions are printed for the proving and valuing of loans. An added attraction of this pamphlet is a simple loan sheet. It concludes with a suggested form of report.

In the opinion of Mr. Birkhead, who speaks from practical experience, nearly every bank that suffers serious loss or closes its doors does so as a result of inadequate attention or supervision by its board of directors who neglect their responsibilities to the bank until it is too late.

The First Step in Making Your Will. Bankers Trust Company, 16 Wall Street, New York City.

Banks today are serving the community in numerous other ways than by merely loaning funds to industrial enterprises. One of these new forms of service is to be

found in this schedule of details about disposing of an estate. To circulate this pamphlet or a similar one is to provide for the future happiness of those who are dependent upon the business executives of the country.

It is an excellent pamphlet to distribute among the heads of departments in industrial plants. At least a copy should be in the plant library.

What a "Cost System" Should Do For You. Chamber of Commerce, United States, Washington, D. C.

This circular consists of about four pages. It therefore has space for only brief remarks on such topics as: Value of Cost Accounting, Variations from Standard Practice, Control of Overhead, and Expense of Cost System. Requests for this circular should be addressed to The Fabricated Product Department, Chamber of Commerce, Washington, D. C.

How to Compute the Excess Profits Tax. By Max Rolnik, formerly Deputy Collector of Internal Revenue at New York. The Mechanics and Metals National Bank, New York City.

The purpose of this booklet is to help readers to compute correctly excess profit taxes in 1920. Doubtless it will also be useful in connection with those tax returns which have not yet been completely audited by the Treasury Department. It will supplement several discussions which have already appeared in *Administration*. The plan of the booklet is first, to state cases of common errors and then to show the correct procedure and their solution. Forty cases with comments are given.

These cases may be listed as follows:

1. Invested capital and borrowed capital
2. Capital stock issued for cash
3. Subscriptions received for stock
4. Contributions and assessments received
5. Unissued stock and treasury stock
6. Treasury stock acquired during taxable year
7. Stock sold during taxable year
8. Stock issued as a bonus with other stock

9. Capital stock issued as a bonus with bonds
10. Tangible and intangible property
11. Stock issued for tangible property
12. Stock issued, based on appreciation of assets
13. Stock distributed for services
14. Stock issued for intangible property
15. Cash value of intangible property
16. Liabilities assumed with purchase of property
17. Capital stock and bonds issued for property
18. Intangible property acquired for cash
19. Property acquired after March 3, 1917
20. Surplus
21. Accrued income, prepaid expenses and unearned income
22. Operating deficit at beginning of taxable year
23. Reserves
24. Profits or losses not in surplus
25. Insufficient or excessive depreciation and depletion
26. Discount on bonds
27. Tangible assets charged to surplus
28. Intangible assets charged to surplus
29. Federal income and profits taxes
30. Dividends
31. Admissible and inadmissible assets—classification
32. Effect of inadmissible assets on invested capital
33. Admissible and inadmissible assets—adjustments
34. Inadmissible assets where taxable income is derived therefrom
35. Inadmissible assets where non-allowable interest is paid to purchase same
36. Invested capital disproportionate to taxable income
37. Computation of tax for period of twelve months—based on invested capital
38. Computation of tax for period of twelve months—based on maximum tax payable.
39. Computation of tax for taxable period of less than twelve months—based on invested capital
40. Computation of tax for period less than twelve months—based on maximum tax payable

The booklet has three appendices:

Appendix I deals with adjusted average when invested capital is increased or decreased during taxable year; Appendix II takes up the cash value of intangible assets on the basis of earnings; Appendix III deals with the computation of available income when dividend is paid after first 60 days of taxable year.

What The Retailer Does With the Consumer's Dollar. The University of Wisconsin, Madison, Wisconsin.

To answer accurately the question raised in the title of this bulletin, the Wisconsin Agricultural Experiment Station, co-operating with the Wisconsin Division of Markets and backed by the Madison Association of Commerce, conducted a very careful investigation.

This bulletin is to be commended for its definition of technical terms, such as buying price, selling price, operating margin, operating expense, etc.

Not only the subject matter, but also the mode of treatment is succinctly shown in the following quotation from the bulletin:

There are two current ideals of business. One is based on maximum sales at lowest margins to secure similar aggregate profits; the other is based on minimum sales at maximum margins. The former is more in keeping with public interest. The large store can buy cheaply enough to make a profit when the small store is losing money. Moreover, the large store can study and find means of reducing costs which the small concern cannot do. This is so because small stores make insufficient money to pay even proper wages, without hiring experts. To assume, therefore, that large stores will voluntarily reduce prices in order to drive smaller stores from the field is not generally in keeping with retail store customs and practice. Under present conditions, therefore, margins received by retailers are regulated generally by the width of margin required to keep the small, inefficient store in business. This is unfortunate because the small store, as such, has not the funds with which to pay for management which will take the initiative in improving retail conditions. It is powerless actively to stimulate conditions among the retailers of the city which will generally result in (1) creating greater efficiency in buying; (2) reducing operating expenses; and (3) reducing margins. Neither can these small stores bring about needed improvements of a strictly trade

character, as for example standardized accounting, systematized and unified deliveries, uniform credit systems and other desirable features.

Improvement in the retail system requires above all else that the handling of food be done entirely by efficient stores. To have all stores in operation large enough to render retail services efficiently requires that their number be reduced either by consolidation or by elimination. This cannot be done easily or without opposition. That it should be done is certain.

Consolidation or elimination might be brought about in a number of ways. The retailers might face the problem squarely and initiate a plan of consolidation, but that is not likely. Competition is such that retailers seem to be unable to take action upon most of the solutions which would require mutual agreement and enforcement. It is exceedingly doubtful whether the causes of present retail inefficiency will ever be eliminated by retailers themselves.

A more dependable means of promoting efficiency in all retail stores is to stimulate keener competition among efficient concerns. It may be done in two ways. A number of consumers might be organized into a co-operative society which, because of a steady large volume of business, could employ the highest grade of management. First-rate management could either force all of the small stores out of business or compel them to consolidate in order to survive. Consolidated stores would mean enlarged sales, more efficient buying of supplies, lower operating expenses, and reduced margins.

If co-operation does not seem feasible as a means of affecting consolidation, consumers might be led to concentrate their patronage on a number of suitably situated, efficient stores. The enlarged volume of business would justify lower expenses and margins. Whether these stores were in competition or not could be ascertained when the problem became of practical importance. Suitable regulations could be imposed then to promote efficient service for the public.

As a last resort, some form of municipal commission working with state marketing officials might be developed to investigate and place before the public facts which indicate the conditions of retailing in respective localities. New enterprises could be required to show reasons why they should be licensed for entrance into retailing business. All concerns which were in business and failed to furnish efficient retail services to the public could be closed by revocation of licenses. This, however, represents a step which progressive retailers should attempt to avoid by seeing to it that other less radical measures are effectively applied to improve or remove present inefficiency in the retailing of food.

Retailers should recognize that as middlemen they are responsible for rendering services efficiently. They should, therefore, try to regulate the conditions of retailing to bring about betterment to themselves and to the public and not permit present weaknesses to continue.

Readers of *Administration* who desire copies of this pamphlet should address the University of Wisconsin at Madison, Wis. and should ask for Bulletin No. 324.

Federal Taxes on Income and Profits—Corporations, Estates and Trusts, Partnerships.
By George Martin Rex, C. P. A. Providence, R. I.

The foreword explains the purpose of this 125-page manual on income tax problems for the classes mentioned in the title:

It has been our aim to stress only the more important features of the Revenue Act of 1918. . . . This information should be of value not only in the preparation of the present returns of income, but also for future reference in regard to Government audits of prior years, as well as in connection with claims for refund, credit or abatement. Pertinent income tax rulings are added to each chapter, and while not having the weight of either the statute or regulations, they show the trend and tendency of official opinion in the interpretation and administration of the law.

The volume is in three parts corresponding to the title divisions of which by far the longest is Part I on Corporations. The chapter headings will show the information given: Invested Capital; Computation of Tax-Relief Sections; Consolidated Returns; Compensation for Personal Services; Depreciation, Obsolescence, Depletion, Amortization; Inventories; Basis for Determining Gain or Loss; Returns and Penalties; Claims for Refund, Credit and Abatement; Tax-Exempt Corporations and Organizations; Consolidations, Mergers and Reorganizations.

The other divisions contain a chapter each, and there is a final chapter on Personal Service Corporations. The chapter on the meaning of invested capital and that on depreciation and amortization are particularly full and valuable.

This volume is not a legal study of the refinements of the income tax puzzle. It is a handbook of ready reference for the puzzled executives of corporations who

have concrete problems to be met and answered. Its form, typography, divisions, and the added rulings make it convenient and serviceable.

Distribution of Decedents' Estates. Columbia Trust Company, New York City.

Those readers who have been following the series of articles on "Accounting in Decedents' Estates," by Professor Greeley of Columbia University, will be interested in this pamphlet which may be obtained gratis from the Columbia Trust Company of New York City.

The bulletin explains clearly and succinctly how property is handled if no will is left to tell what distribution should be made. It shows how property may be disposed of by wills and tells how to calculate the amount of the Federal Inheritance Taxes.

For those who live in New York State it has the added advantage of showing how to calculate the amount of the New York State Tax.

A valuable feature is its index which is remarkably well compiled.

Some Problems in the Actual Installation of Cost Systems. By H. G. Crockett, National Association of Cost Accountants, Woolworth Building, New York, N. Y.

All literature on cost installation is eagerly obtained and carefully examined by cost accountants. The experienced cost accountant will find helpful suggestions in this pamphlet. Mr. Crockett does not list categorically in burdensome detail, the various steps involved in installing a cost system and omits all forms. He outlines his purpose as follows:

Many books have been written on the subject of cost accounting, but generally the chief object has been to establish fixed principles, describe various forms and methods in considerable detail, and to set forth the many reasons why every manufacturer should have a good cost accounting practice.

This article will forego all such discussion, and will be confined to an outline of the more important problems that must be solved during the installation of a cost system, and of the factors that should be considered in arriving at the solution of those problems.

Inasmuch as there are so many factors to be considered in installing a cost system,

Mr. Crockett wisely limits the scope of his article to the *governing factors*.

Local conditions necessarily have an important bearing on any situation, and there are so many governing factors of varying degrees of importance that each individual case can be decided only on its merits, after all of the factors have been brought out. This article will attempt to point out what those governing factors are.

He states these two chief steps in installation:

One is the cost construction or engineering phase, which establishes the foundation and develops the necessary cost information bringing the work up to the point of contact with the accounting records; the other is the accounting phase which takes the cost data and so interprets it through the accounts that the factory executives are given accurate information regarding all factory activities which they wish to have presented to them, and the financial and sales executives are presented with correct statements of financial condition and trading loss and gain as well as adequate statistics of sales, costs, and expenses by various classification.

A point too frequently disregarded or not appreciated is that:

A satisfactory cost system must be built *up* from the factory, not *down* from the accounts; the problem must be approached primarily from a manufacturing and production and not from an accounting point of view.

More than the problem of simple debits and credits is involved in cost installation. "Of what use is it to know that costs are high, if at the same time the figures do not indicate where and why?"

The cost systems considered are order costs, process costs, or a combination of these two, with or without scheduled or standard costs. Specific industries and situations where these systems are applicable are mentioned.

The division of the factory into proper "production or burden centers" is emphasized. After this task is completed, Mr. Crockett takes up the problems of how to distribute burden and how to apply it to the cost of the product.

Some of the questions that must be answered before deciding on the basis of distribution of rent, fixed charges on machinery, and equipment, power, steam and heat, light, repairs, general burden, shop transpor-

tation charges, shop administration costs including superintendence, industrial relations, cost department, and timekeeping costs are clearly and well treated.

In developing the subject the author makes the following interesting point:

It is probably correct in theory to calculate a rental charge separately for each building, because one building actually costs more per square foot than the other, but is any practical purpose served by showing the rental cost per square foot to be greater in one building than another, when the only reason for an operation's being in one building rather than another is because it happened to be started there, or because that is the proper location with reference to preceding and succeeding operations? The manufacturer would not think of moving an operation to another building simply because his rental charge was less in that building—there would certainly have to be a stronger reason than that.

The applicability of four widely used methods or bases for applying manufacturing burden to product, viz., machine-hour rate, man-hour rate, the process or unit-of-product rate, and the percentage-of-direct-labor rate, are briefly discussed. There is also a section on the treatment of general administrative expenses, and selling expenses.

No attempt is made in the booklet to: settle any questions of principle, or to establish any rules of procedure except in cases where a certain practice is practically universal among cost accountants. In the last analysis the success of the cost system depends upon the judgment exercised by the cost accountant in deciding these questions.

The Eleventh Hour. New York Telephone Company, 15 Dey Street, New York City.

What does the average telephone subscriber or user know of the intricate service he is given—behind the scenes?

Very little. So the New York Telephone Company issued without charge this neat booklet to inform him. It consists of a series of about 160 photographs arranged like the film of a moving picture with text explanations alongside. The "plot" is how a busy man and his wife arranged a dinner and theater party over the telephone within an hour.

But the important message is the story behind this which is thus described by the Introduction:

It is the story of the vast organization and the delicate apparatus that make each call possible—the story of a world of unseen wonders. What goes on in this world—the flashes of signals, the spoken words, the constant tests and care taken to maintain a great system of communication—is unknown to you.

The executive will find this booklet interesting as an example of an efficient way of getting a publicity message over to a popular audience. It makes technical points clearer than a thousand words of explanation, and it dresses them up in the story form which makes people want to read.

Even without the story form, we might have services of all sorts explained thus, the pictures being somewhat of the nature of the so-called "educational films." The device is worth remembering especially as a method of getting a careless, take-it-for-granted clientele, or the general public, to realize some of the technical difficulties and problems of management, that lie back-of efficient service.

Overhead Expense. Fabricated Product Department, Chamber of Commerce of the United States, Washington, D. C.

This bulletin is one of several which have been published by the Chamber of Commerce at Washington to assist its members in dealing with their common problems, especially those relating to manufacturing and production.

A manufacturing enterprise, according to this bulletin, consists, in its simplest terms, of (a) A place to work, (b) Machines to work with, (c) Men to do the work, (d) Material to work upon, and (e) Management to co-ordinate the whole.

After discussing the meaning of these terms, the bulletin outlines the business standard for a normal year. On this topic it says:

Our cost systems are far too rigid. Under cost methods still largely in use overhead expenses are spread too thinly in times of forced production and, massed too heavily in periods of slight demand and production, giving in the former case costs that are artificially low and unfair to

the management and in the latter case costs that are artificially high and unfair to the public, and moreover costs which the market will not sustain.

For the sake of convenience, we split up our business into years and treat each year as though it were separate, distinct and unrelated, whereas no such sharp cleavage exists. Year merges and glides into year, one dependent upon and connected with the other. The injustice and inaccuracy of a complete and abrupt cut-off is clearly illustrated by an income tax law which heavily taxes the profit of one year, and makes no compensating allowances for the losses of the following or preceding year's operations.

Cost systems should recognize this continuity of time wherein any single year or month *may* or *may not* typify and represent normal production and demand. There are expenses, it has been shown, which continue whether the plant is idle or in operation, expenses that moreover, bear no direct relation to output. Cost systems should provide that these expenses, usually designated as over head expenses, should be absorbed and pro-rated on the basis of a *normal year*—that 100° mark on the business thermometer. Thus, in time of unusual production—production exceeding normal—the overhead should be more than used up in costs, and a surplus out of overhead cost created to take care of those years when the output is below normal and the overhead charges not fully absorbed in the costs of that year.

To take a very simple illustration: Let us assume the normal output of a department is 100 pieces and the overhead \$100, or an overhead charge of \$1 per item. If the department produces 150 pieces at a normal overhead charge of \$1 per item, not only will the \$100 overhead be used up but there will be an additional \$50 as a reserve accruing to the management. When the output of the department drops to 50 pieces, only \$50 overhead will be applied to this reduced production, and the difference made up from the reserve established during unusual production. This method of cost procedure has numerous advantages, two of which it is here appropriate to mention.

1. It will assure the business man a reward for his efforts in speeding-up.
2. It will eliminate the needless throttling of business by the impractical attempt to load semi-normal production with greater charges than can or should be borne.

The determining of a normal year is not an easy matter. It requires a long look behind and

a far look ahead. It is by no means sufficient to accept the operations of the preceding year as the sole standard. The normal year is different for a new organization or industry from what it is for one long established. The normal year does not remain on a dead level but should probably curve upward gradually and conservatively with the growth of population and markets. To do otherwise would indicate industrial stagnation.

One of the most valuable sections deals with the necessary cost system adjustments. From it the following is quoted:

Though cost accountants and industrial engineers are prone to using strange and technical terms for it, the accounting device used to secure operation on a basis of a normal year is the now familiar one of the Reserve, or a modification thereof.

For purposes of illustration, let us recall how a simple reserve, such as the reserve for bad debts, operates. The operating account "bad debts" is debited each month with the estimated amount of bad debts likely to be sustained, and the account Reserve for Bad Debts credited each month with a like amount. As bad debts are actually sustained, the amount thereof is debited to the Reserve for Bad Debts. It is very easy to ascertain for income tax purposes the amount of bad debts actually sustained during the year by referring to the debit side of the Reserve for Bad Debts, and ascertaining the estimated allowance for bad debt by referring to the credit side of the Reserve for Bad Debts.

So the estimated normal overhead expenses will be charged into costs upon the particular cost method employed (man-hours, machine-hours, productive labor, etc.) and likewise credited to the Reserve for Overhead. The actual overhead expense will be debited to the particular expense accounts, and closed out periodically to the Reserve for Overhead. Accordingly, the debit side of the Reserve for Overhead will give the actual expense totals, and the credit side the estimated expense. It is assumed such a reserve for overhead will be subdivided in accordance with departmental requirements, and where convenient the expenses will be scheduled.

The preceding has, moreover, left out of consideration refinements recommended by cost accountants of the principle of the Overhead Reserve, such as Under- and Over-Earned Overhead or Burden, Overhead or Burden Variance, Supplemental Rates, etc. These do not disturb the essential principles set forth and are apt to confuse a simple presentation of them.

CHRONICLE AND COMMENT

BANK AT PLANT

A bank that pays 6 per cent is the Clothcraft Savings and Loan Association organized eight years ago for the benefit of the employees of The Joseph and Feiss Company.

Clothcraft, house organ of the company, states that there are several unusual features about this bank, first of which is that the investor need not step outside the shop to deposit savings, besides receiving 6 per cent interest, compounded quarterly.

Deposits for one person cannot exceed \$200. When this limit is reached, depositors are advised to transfer the sum to a regular banking institution. The Loan Association has been established to advance money to employees at 6 per cent interest, or one-quarter of 1 per cent for a two weeks' period.

SELLING SERVICE

"Don't Wink at a Girl in the Dark," is the unique title of an article in *The Morse Dry Dock Dial* on how they handle their advertising problem. Service is the keynote of their advertising. By giving efficient and skilful service to shipowners they can depend on these shipowners to recommend them to other owners.

This article states:

Now service is a harder thing to sell than is a manufactured article. When you buy a shirt you can generally tell something about the quality of it and how long it will wear and whether it is worth the price asked, but when you buy service you are buying something that you cannot always feel sure about, and so it is important that a shipowner, for example, should be told about the service that we have to sell, and told in such a way as to convince him. That is advertising.

The method of advertising used by The Morse Dry Dock Company is the use of the printed word which they believe has become a very important element in the business world of today.

The simile, "Don't wink at a girl in the dark," operates at this point. A business

or industry that conducts its negotiations without advertising is likened to the man who winks at a girl in the dark, because the girl cannot see the wink, neither can anyone else. The company knows that it is doing its work well and so do its customers but "unless new customers are secured, no business is going to progress very far and so it is necessary to advertise."

100 PER CENT SAFETY

Working for 100 per cent safety, the foreman of the electrical department of the Standard Oil Company in Indiana started out seventeen months ago on a safety crusade. At the end of the time the quota was realized and in a department where a large group of men are working at more than normal hazards, there has not been a single accident for more than a year and a half. During that time, according to *The Stanolind Record*, employees' magazine of the company, there have been less than a dozen minor scratches or abrasions.

Commenting on the accomplishment *The Record* adds:

There are two principal factors which make a record of this kind possible. First, the foreman must be a genuine Safety man who demonstrates to his men, by his actions, that Safety is first in his department. Second, the men in a department must be Safety Men who will not tolerate careless actions. When everyone works toward the same end, it is very easy to obtain such a record.

FOR THE GOOD OF THE PLANT

To see whether or not an applicant is fitted for his job is the task of the Health and Safety Committee of the Dennison Manufacturing Company. These physical examinations are given at the time of employment, not only to see whether the applicant is physically able to undertake his allotted task but to protect the other employees against the possibility of infectious or contagious diseases.

Round Robin, house organ of the company states:

Male applicants are given a fifteen to twenty minute examination. The result of the examination is confidential. The doctor simply reports whether the applicant is fit for the job he is to have and if not, the kind of work he is physically capable of doing.

In the report of the Works Committee for the month a list of discharges is published for the benefit and perusal of the employees. A table is printed monthly giving the number of employees discharged for unsatisfactory, unreliable, or inefficient service, poor attendance, misconduct, etc.

This committee, which has charge of the welfare of the employees, also announces from time to time the status of the employees in correspondence courses given under the auspices of the company, the functioning of the circulating library and the distribution of awards for suggestions.

BANK PUBLICITY

The house organ of the Denver National Bank issues about 8000 copies a month. About 2000 copies are distributed by the railroads operating in Colorado and the State Immigration Commissioners. Every bank and banker in Colorado, Wyoming, and New Mexico receive them, as well as about 300 banks throughout the United States, and about 400 officers of banks throughout the country. There are about 700 firms and individuals in Denver representing every line of industry and perhaps 300 throughout the United States on the mailing list by request. The investment bankers of America are receiving the monthly Bulletin issued by the Denver National Bank at the request of the Bond Department of the International Trust Company of Denver.

The public librarian of Denver has requested the company to place about 100 libraries throughout the United States on the mailing list; the majority of them are not only placing them in their reference files and binding them, but have made requests for complete sets of the publication.

About forty or fifty copies go to various departments of the Government at Washington, D. C., and 150 more to county agents and other people connected with the Department of Agriculture throughout

the United States, but more especially in the West. About 30 or 40 newspapers and the same number of colleges are also receiving them.

The mailing list of the house organ increases about 100 copies each month by requests coming over the telephone or through the mails.

This is a résumé of the data sent with a copy of the house organ of the Denver National Bank in the form of a multi-graphed letter.

SAVING THE WASTE

Waste! On this subject *The Telephone Review*, house organ of the Telephone Company, shows the waste cleared out daily in their waste-paper baskets.

The editor writes:

If everyone in the company shied one good clip a day into the trash basket, in a year enough money would be wasted to buy a big twin-six Packard car. With 47,000 persons employed in the company and clips costing at the rate of about thirty-five cents a thousand, the total each day would cost the company \$16.45, enough to buy a handsome watch.

In one day the company found a dozen clips distorted by a stenographer; several sheets of Bond paper on which the book-keeper had drawn little pictures; lead pencils that were considered "too short" and which could be used for several weeks if pencil-holders were obtained from the stockroom where they are furnished.

Carbon paper, ribbons, envelopes with only one word mistyped, etc., were mixed with the débris of erasers carved by hand by idle fingers, stiff cardboard backing, crinkled paper caught in drawers, rubber bands grown "peppless" because they were held too long out of the box, etc.

SANE SALESMANSHIP

What makes the real salesman is ably presented in *Our Boys* published monthly by the sales division of The Curtis Publishing Company.

One who has a steady eye, steady nerve, steady tongue, and steady habits.

One who turns up with a smile and who still smiles if turned down.

One who strives to out-think the buyer rather than to out-talk him.

One who is silent when he has nothing to say—and also when the buyer has something to say.

One who takes a firm interest in his firm's interests.

One who earns respect by being respectful.

One who can be courteous in the face of discourtesy.

One who keeps his word, his temper and his friends.

COST ACCOUNTING

About 350 books on the subject of costs in all industries are listed in a Bibliography of Cost Books just issued by the National Association of Cost Accountants, 130 West 42nd Street, New York. The list, which is probably the most complete bibliography on the subject extant, was compiled after an extensive study of the published literature; and while it does not attempt to go beyond the field of books, it is undoubtedly the most useful contribution to the field of cost accounting which has recently been published.

In a brief foreword to the bibliography it is explained that:

In presenting this bibliography to our members there are certain points which ought to be emphasized. In the first place the bibliography is limited to books. We have purposely omitted the pamphlets and other material. There is a considerable quantity of such material in circulation and we hope at a later date to issue a supplementary bibliography covering pamphlets and other literature of this type.

In the second place, no attempt has been made to indicate the relative value of the books listed. We hope to issue shortly a selected reading list which will indicate the sources of authoritative information on different phases of cost accounting, but at this time it was thought best to supply a list of books which would be as complete as possible.

The list is based on an extensive study of the published literature. It is probably too much to expect that no books have been overlooked, but we believe that most of the literature which has been published is included.

For convenience the bibliography has been divided into five groups.

1. Books treating the whole field of cost accounting.

2. Books on general accounting and auditing which contain some reference to cost accounting.

3. Books on industrial management which contain passages devoted to cost accounting.

4. Books dealing with cost accounting for particular trades or industries. In this section the books listed have been divided into groups corresponding to some of the leading types of industry.

5. Books dealing with some particular phase of cost accounting.

The foreword concludes:

If this bibliography is used with due regard to its nature it should prove a useful guide to the general literature of cost accounting. It must be used with discrimination and the value of each book listed must be considered with relation to the date of its publication and the general nature of its subject matter. The books published abroad and those published some years ago may not be of as great practical value as some volumes recently published, but they frequently present interesting material for historic or comparative purposes.

LIMITS STUDENTS

At Harvard the School of Business Administration has decided to limit the number of men it will admit next year. Not more than 300 will be accepted as members of the entering class. The class admitted this year numbered 303.

The tuition fee has been raised to \$400. The school is under obligation to give instruction of the highest quality.

Men who apply up to May of this year will be admitted on the old entrance requirements of a degree from a satisfactory college. After May 1 applications must be accompanied by a complete transcript of the applicant's college record.

ACCOUNTANTS ORGANIZE

A new accountants' organization was recently formed in Pittsburgh.

Its name is "Refractories Accountants Institute." It is a professional section of the Refractories Manufacturers Association.

The organization has its headquarters in Pittsburgh, although it is national in character and has 101 members.

TO STANDARDIZE FORMS

The National Association of Purchasing Agents is planning a file of purchasing forms and records to be maintained at its head-

quarters. Members of the Association are being asked to send in copies of all their forms.

EVERY-DAY ECONOMICS

Editor *Administration*:

Part of the trouble today with the world is caused by false reports that are not based on real facts.

In the *Administration* for April, there is an article "Every-Day Economics" by Mr. Don. C. Seitz. In it he says:

As a case in point, I recall receiving \$2.64 for enough wool cut from one of my sheep to make two suits of clothes. Yet the lowest quotation I could get from a tailor at the time for a single suit was \$125.

Sheep give, according to the part of the country in which they are raised, from five to nine pounds of wool per sheep. The writer's sheep (he does not give weight) will give say eight pounds and he gets 33 cents per pound or \$2.64. In scouring the wool there will be a shrink of over 50 per cent on the average. Taking 50 per cent leaves four pounds of wool. In manufacturing there is a loss of about 20 per cent leaving 3 pounds 3 ounces per sheep. This is just about what a suit comes to.

Maybe \$125 was the lowest price he could get from *his* tailor but not from a tailor. At that time you could get the best grade suit made for \$85. But if you must pay \$50 for the tailor's name, then you will have to pay \$125 for an \$85 suit.

Another thing, his wool (33 cents a pound grade) would not be put in the highest price goods, but in clothes that were selling during the war around \$40 to \$60.

Respectfully yours,

(Signed) W. F. JENNINGS,
F. T. JENNINGS & Co.,
Wool Dealers,

Philadelphia, Penn.

TESTS OF INTELLIGENCE

My Dear Mr. Conyngton:

First, may I express my appreciation of your new journal. Both in form and contents it strikes me as being an admirable and very promising publication and one which ought to meet with considerable suc-

cess. I am particularly struck with the caliber of its articles and the standard of their authors. A journal which will make possible a serious and thorough discussion of subjects on business administration will be welcomed by many of us who have grown somewhat tired of the scrappy way in which business subjects are presented in most of the current journals.

More specifically, I wish to express my appreciation of the review which you gave me.¹ However, I should like to call your attention to a slight misapprehension which I think you are under as regards my exposition of the subject of intelligence. There has been a very decided drift among psychologists away from the idea of a unified faculty of intelligence, such as described by Mr. Goddard, toward a concept which regards intelligence as a composite of many mental activities more or less closely interwoven. All of the definitions of intelligence which you quote from me, are the traditional definitions which I put in the mouths of other people simply to call attention to the fact that they are inadequate and useless. Starting with the traditional idea represented by Mr. Goddard, all of my practical experiments have pushed me toward the conclusion that there are different kinds of intelligence and that these must be measured or dealt with each in its own way. In other words, there is no such thing as intelligence which can be measured by a single yardstick, but there are various types of mental activity under the general class term of intelligence, each of which has its own possible levels and must be measured in terms of its own units.

In fact, this concept is the distinguishing feature of my work and you can readily see that if it were not true, then the value of psychology for the purposes of selection and classification would be extremely limited. For it is apparent that in the present complexity of social organization, people are distributed not on the basis of their level in general intelligence, but upon the basis of their level in a great many different kinds of intelligence. To be sure, if a very wide field is taken into consideration, the levels of general intelligence will tend to coincide with levels in specific intelligence. But,

¹ See *Administration* for April, 1921, page 554.

from a practical standpoint, we are compelled to consider the capacities of very small numbers of people with relation to specific kinds of work.

Yours very truly,

HENRY C. LINK,

United States Rubber Company,
New Haven, Conn.

April 12, 1921.

Dear Mr. Conyngton:

I have read with great interest your review of the lectures on employment psychology, and appreciate the very careful summary of the information contained in the lectures. This is a real review.

My main difficulty with these psychologists is that they devote so much energy to one or two phases of intelligence and knowledge, and apparently leave out of consideration the power behind, or the balance wheel, which keeps the psychic forces in harmony.

I am afraid we have to go a long way yet before a man in my position can apply these principles to the hiring of help, which is only an occasional occupation. In dealing with millions, the advantages are seen; but honesty and character, with fair intelligence, are more important for our purposes than a highly developed intelligence with less of the other characteristics.

With kindest regards, I am,

Yours very truly,

HENRY MOIR,

Vice-President and Actuary,
Home Life Insurance Company,
256 Broadway, New York.

April 14, 1921.

SELLING THE TRADE

Manufacturers who advertise directly to the consumer and sell direct to the retailer with the avowed purpose of eliminating both the trade papers and the jobbers, come in for a hot shot at the hands of J. A. Coleman, Advertising and Sales Manager of the De Luxe Brush Company, Manufacturers of the Duo Lather Brush; in an address before the Business Press Association, at its dinner at the Poor Richard Club, Philadelphia.

In his address Mr. Coleman said:

Where the article is new, the market untried, the jobber and the dealer unfamiliar with the product, it is little less than suicidal for the manufacturer to employ a large staff of salesmen and have them go to the dealer direct, telling him they have eliminated the jobber and the wholesaler in order to give him a larger margin of profit. Dealers are not easily fooled; they see at once when a product is wrongly merchandised and if the manufacturer is irregular in this one particular, they assume that he may be irregular in many other matters of ordinary business, and they are quite likely to decide that the whole proposition is unsound and dangerous. But if, on the other hand, the manufacturer is introduced by his trade paper to the jobber and in turn by the jobber to the dealer, and then by the dealer to the consumer, through his clerks, his windows, and his local newspaper advertising, he has unquestionably arrived through "regular" channels, and is entitled to both the confidence and respect of all who come in contact with his goods.

The Business Press plays a most important part in modern merchandising. But the importance of its work is not appreciated because the cost is too low. The only kind of business that can thrive in this country is that which makes money for everybody. And any business which starts out with the presumption that it can make money for only a very few individuals, and yet grow big and powerful in its field, starts under a delusion. The trade press is doing the nursery work for the next generation of advertisers. It is teaching the manufacturer to talk, so that he can be heard over a steadily increasing radius.

Many of the most successful and largest advertising accounts are the product of the trade paper man who sought them out and encouraged them in their growth, until they were ready to be handed over to an advertising agency. After which procedure, the trade paper was promptly crossed off the list, because its space rate was too low.

The trade paper publisher, in many instances, like the poet and the painter suffers many hardships—in spite of the valuable service he renders to American business—because he is too modest to demand a just reward for the service he renders. However, the day will come when trade paper combinations or groups will align themselves with jobbers associations, or distributing corporations and with tremendous dealer organizations, until they become a real power, having absolute control over the distribution of merchandise to the public. The trade paper stands between the jobber and dealer and the manufacturer. His position is a commanding one and while today he comes to you, asking for advertising that will keep his book alive; tomor-

row, we manufacturers will go to him with our hats in hands, and try to prove to him that our merchandise, our specialty, our commodity is a worthy one, entitled to the jobber's attention, suitable for the dealer to sell, and safe for the public to buy.

It is possible that the publisher of the consumer medium and the advertising agent have as yet failed to realize that they are forcing the trade paper publisher and the jobber and the dealer to combine forces and raise a Chinese wall in self-defense; but when that time comes, there will be only one way in which to enter the national market and that will be through the main gate of the officially endorsed trade publications.

And I firmly believe that it will be a better thing for manufacturers generally, that this thing should come to pass. It would prevent many serious mistakes in merchandising and distributing commodities to the public. If there were but one channel, then that alone could be used. As it stands today, hardly any two commodities on the market are merchandised in exactly the same way. The result of this chaotic condition being a well populated grave-yard with numerous pearly white tombstones, shimmering in the wake of advertising.

The fault lies with the trade publications, the publishers of which are unable to render the service required by the advertised—for the very same reason that the agency is unable to render it.

If the trade papers were placed upon a properly sound basis, and the rate fixed in proportion to the value of the service rendered, (rather than in proportion to circulation) then the trade publisher (who is best fitted to prepare both the advertisement and the message it is to deliver) could give the manufacturer a really efficient service.

My contention is that a full page in a trade paper which now costs net \$100, actually stands the manufacturer about \$150, when everything has been paid for. Would it not be a better plan for the trade paper publisher to charge \$150 at once and take care of the service himself, giving the agency its 15% as a net margin. Then the publisher himself would make more money, the agency would make more money and the manufacturer would spend no more, but the copy being more effective would bring greater returns.

SUGGESTIONS SOLICITED

The Otterbein Press in its employees' magazine, *The Pepper Pod*, solicits suggestions for a more efficient management of the plant. The plant is likened, in the article, to an industrial democracy where publicity is given to every grievance, every

constructive thought, every suggestion. To quote:

Publicity will be given not only to the suggestions but to the reports of the executives to whom each suggestion was referred. Those who pass on the ideas submitted will thus have a strong motive for fairness. The committee (Suggestion Committee) asks each executive to submit in writing all good points and all bad points of the idea. We want no idle vamping or guesswork. Tell us simply if the suggestion be good or bad and why. Also if it is good, state as nearly as possible how good. That means if the idea creates savings tell how much in dollars it is likely to save in a year. If it will increase production, tell to what extent. If it will give our product higher quality, tell how.

In order to have a scale to weigh the various classes of suggestions the plant has accepted these standards:

For an accepted suggestion which increases the comfort of our employees our policy is to give a uniform award.

For criticisms which have a constructive value we will give a similar award.

For suggestions which will increase the quality or quantity of our production or make savings in time, energy or material we will give in proportion to the estimated monetary value of the idea.

When the Suggestion Committee receives the suggestions, they are immediately typed and four copies made of each item. One copy is immediately posted on the bulletin board for the scrutiny of the employees, two go to the executive most concerned by the suggested improvement and one is kept by the committee, with the original.

DEPRECIATION

Several efforts during the past ten years have been made in the direction of a standard accounting terminology. Various committees of accounting societies have been working on the problem, but as yet, no terminology suggested has been readily accepted as standard.

One finds terms used by professional accountants to mean one thing, and understood by the laity to mean something different or something in addition to the definition followed by accountants. Lawyers, and engineers may use the same term with still a different connotation. In this con-

nction some remarks by Mr. Thomas B. Gwynne of New York concerning some aspects of depreciation are appropriate. The effort to delimit and define more closely the meanings of technical terms will ultimately result in the adoption of a standard terminology brought about not by official action of any body of professional men perhaps, but by general use of the terms.

Mr. Gwynne says:

The word "depreciation" as used in mill accounting in connection with depreciation of machinery and buildings is somewhat of a misnomer and very misleading. Amortization would be a much better word.

The retiring of various sums of money in various periods of time is what is involved. The actual physical depreciation of a machine or building is but a factor (and frequently only a partial factor) in this proceeding. Thus, the expected useful life of a machine or building is used as a basis to determine the period of time in which the money value is to be retired. Frequently, on account of obsolescence, a machine or building is allotted a shorter life than it otherwise would be allotted and thus a machine may frequently be in just as good physical condition at the time it is scrapped as the day it was put in. This latter fact will show how misleading the word "depreciation" is when used in this connection of retiring a sum of money.

This has long been the practice in accounting circles. In the last few years since the inception of the Excess Profits Taxes the U. S. Government has called to Washington some of the leading accountants of the country, which has resulted in Federal Tax Regulations becoming very much in accord with accounting practices. (See Regulations No. 45, Articles 161-171.)

Suppose you had a workman in your employ at a wage of \$1000.00 per year and suppose further you went to him, and said, "John, I am going to pay you \$20,000.00 right now and I expect you to work for me for 20 years." In such case you would retire \$1000.00 per year for 20 years by charging up \$1000.00 per year for labor and thus at the end of 20 years you would have charged up the entire sum.

Machines have supplanted workmen to a great (and ever increasing) extent. Instead of paying for the man you pay for the machine. In the latter case, tho, you invariably have to pay for the whole value of the machine in advance at once, while in the case of the man you invariably pay for him as he goes along. However, whether machine or man, if you pay in advance for something that you expect will last you in a usable

manner for several or many years, there is but one course to pursue, namely, to divide the original expense up into as many equal parts as there are years in the expected usable life and charge up one part annually until the original sum is exhausted.

Properly to depreciate, or rather amortize, machinery and buildings, the identity of each piece of machinery and each building must be maintained in the records. Unless the identity is maintained it is impossible to tell when to stop writing off the original values of the various properties.

The life of a machine or building is governed entirely by circumstances. The U. S. Government recognizes this and has no established rules for depreciation. As illustrations: an adding machine in a small office used perhaps half an hour a day might reasonably be given a life of 50 years, whereas the same kind of a machine working every minute of the day in a busy bank might reasonably be given a life of only 10 years; a building containing a printing press getting out a weekly paper might reasonably be given a life of 50 years (or more) while the same building (brick in both cases) containing a high-powered daily press turning out several thousand copies an hour might reasonably be given only a life of 25 years. Then again the policy of one mill man is always to be on the lookout for faster and better producing machines and to replace his current machines with them even tho his current machines are practically brand new; while the policy of another mill man is to hang on to his machines to the last gasp. Obviously depreciation rates differ here. The progressive man might allot 10 years to certain machines whereas the non-progressive man might—and with reason—allot 30 years to similar machines.

In other words so many factors enter into the useful lives of machines and buildings in all the various parts of the immense area of this country with its varying climatic conditions, that a universal rate of depreciation (amortization) is simply an impossibility.

The best judges of the lives of various machines and buildings are the owners of mills and their foremen. If a man has a machine today that is working in good condition and is giving him satisfaction and if he has had that machine 50 years and can prove it beyond all manner of doubt, who can gainsay him if he wants to claim the life of the machine as say 66½ years or on the basis of a 1½% depreciation rate on the original cost?

The U. S. Government Board at Washington is reasonable and open to conviction. They want proof and substantial proof, in all cases where adjustments are to be made in connection with previous incorrect returns for taxes.

An appraisal company will list the machinery of a building and will put the machines down as having depreciated in physical value, say 10%. A few years later the same company may make another listing and still put the same machinery down at only 10% depreciation altho the machines have been in use right along. Furthermore, in the second listing, the depreciated value may be greater than the replacement value in the first listing owing to the higher cost of things.

In connection with appraisals the word "depreciation" is properly used, and when so viewed it can readily be seen that the word is very much misused when it attempts to convey the gradual retiring of a sum of money as its meaning. Also it can be seen from the above appraisal illustration that values and depreciation (so-called) have no connection.

POST-GRADUATE STUDIES

The Western Electric Company is undertaking a new and somewhat novel experiment in the education of some members of its Engineering Department. It is planning to choose 12 employees who hold the degrees of B. A., B. S., B. Ph. or an equivalent degree in engineering to pursue advanced study leading to the Masters' degree.

The plan calls for part time work at Columbia University. Working hours in the offices and laboratories of the Western Electric Company will be so adjusted as to permit attendance at the regular class sessions of the University. The selection of candidates will be based on evidence of their present attainments and the promise held forth for their future scientific work.

Due weight will be given to the prospective ability of the candidate to employ his further training in the service of the company.

EMBLEMS FOR SERVICE

Following the precedent established by the United States Government in giving service buttons to ex-service men, The Bearings Service Company is to give service emblems to their employees.

These service emblems will signify that their wearers are employees of the company and will also indicate the length of continuous service in the company's employ. The pins are designed to suit the requirements of both the men and women employed in the plant. The pins will vary

in quality and design with the number of years the employee is in the company's service. Pins will be exchanged yearly and the employee will be supplied with the next highest service emblem in point of number of stars or type of pin or both as the case may be.

In order to include in the scheme men whose service with the company has been interrupted with service in the government, *Bearing On Us*, house-organ of the company says:

Employees whose period of continuous service with the company was interrupted by government service on account of the war will have pins awarded without regard to this interruption.

READING COURSE

A unique opportunity for Grace employees to be in touch with the specialties of the company is given in a new reading course for the employees. Announcement of this course is made in *The Grace Log*, the magazine of the company. Besides giving the employee information and training along the lines of the firm's specialties, it will help members of the firm going out to take positions in foreign offices of the company to secure a general knowledge of conditions—economic, commercial, industrial, and social, prevailing in these countries.

"The course," says the article, "will cover six months of reading and will include the most vital information gathered from books in both the Reference and Circulating Libraries, from Government reports, and the monthly, weekly, and daily press."

The Grace Company will make no charge to employees for the course which they believe will be as valuable as any business training course offered by correspondence schools etc., in the country. For members of the firm who are going into foreign offices, the course is a prerequisite.

The course will be divided into sections; one emphasizing a study of the different countries in which the firm is especially interested like Peru, Chile, Bolivia, Argentina, China, Japan, etc., and the other section will emphasize the theoretical aspects of trade such as methods, shipping, merchandising, banking, insurance, languages, etc.

ADMINISTRATION

The Journal of Business Analysis and Control

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THE VALUE OF STATISTICAL INFORMATION

BY GEORGE E. ROBERTS *

A PERIOD of expansion often overleaps itself. When reaction comes, the pendulum swings as far in the other direction. Appearances at such times are very deceptive. The demand for goods is highly elastic, as every line of business has had occasion to observe during the past year. While certain wants of the population are imperative and must be supplied from day to day, others may be deferred until tomorrow. Construction work, which is always in order for the purpose of improving the means of production and of enlarging production, is a large factor in every period of prosperity, and may be to a great extent suspended for a certain length of time.

When the equilibrium is lost, there is an immediate suspension of enterprise and shrinkage of operations in an instinctive endeavor to find the position where the industries will again be mutually supporting.

The losses and hardships incidental to these periods of readjustment in business are serious. It is very desirable, of course, that a greater degree of stability shall exist. It is not to be

supposed, however, that America will seek it by turning the clock backward toward arbitrary control of industry or curtailment of industrial liberty. The scheme of industrial life now being tried in Russia, under which a government rules and directs everything, assigns each person to his work, and apportionments to each his share of the product, is not likely to be adopted elsewhere, at least until it has shown better results in Russia.

A fascinating theory exists that industry might be maintained in perfect balance, and operated with the minimum of friction and waste, by having it regimented and run from above. But this theory leaves the variable human element out of account, even from the standpoint of efficiency, and it leaves out the value of liberty as a factor in individual development. It is a theory focused upon day-to-day results, with the emphasis laid upon routine performance. Its aims are concentrated upon using and dividing what we have rather than upon developing the latent resources. The lesson of civilization has been that individual and social progress are both promoted by giving free play to individual ambition and initiative, and by the develop-

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ment of personal responsibility. They come, not by telling people what to do and driving them to do it, but by affording an incentive to independent personal effort.

There may be provisions that society can make to lessen the hardships of these periods of reaction. That is a matter for study and experiment. It does not involve, however, any change in the general organization of industry.

The fundamental remedies are not by putting society into strait-jackets, not by an increase of arbitrary authority, or by limiting the responsibility of the individual, but by a wide diffusion of knowledge concerning our co-operative system of industry and by striving to strengthen and stabilize that system. People cannot be expected to work together effectively unless they have a common and sympathetic understanding of the purposes they are zealously working to accomplish and likewise, of the means by which they are working.

A knowledge of the fact that there is a normal state of equilibrium throughout industry, which affords a basis of just and harmonious co-operation between all classes; that no class has anything to gain, and every class is certain to lose, by a disturbance of the equilibrium, would of itself be a great stabilizing influence. It would tend to narrow the scope of industrial disputes, eliminate the ideas of class conflict and international rivalry, and develop a spirit of loyalty among all classes to the unified organization which is serving the whole social body. The more completely each individual can have the picture of this great organization in all its ramifications and workings, and of his own part in it, the more fully will he appreciate his own responsibilities to it and the better will his work be done.

II

The most effective means of setting forth the accomplishments of this industrial organization and the distribution of benefits, is statistics. No other form of information admits of such concentration, or when properly prepared is at once so simple, comprehensive, unequivocal, and conclusive. A single table of figures may not prove everything that it is offered to prove, but it is definite information so far as it goes; and if it is used improperly the remedy is in more information of the same definite kind.

Much of the discord and contention which exists throughout society today is due to misstatements about matters of fact, when the truth ought to be made known beyond the possibility of controversy. The public should have authoritative information, supplied without prejudice or argument, about all the matters that have to do with our social relations and that throw light upon the service of the industrial organization.

Everyone whether business executive or walking delegate ought to have a statement of the national product, in goods and services, for a given year, that would take the place of anonymous estimates in circulation; a statement showing how the product was disposed of, who absorbed and enjoyed it. Such statements worked out anew from time to time would show the trend of development. Nothing would be more important as a guide to intelligent discussion of many of the social problems which excite intense feelings, than reliable information upon this point. It would show the outside possibilities that lie in division of present production, and indicate the extent to which resort must be had to greater production. This problem underlies the principal controversies of

the day; and it is possible to obtain the facts and put them in form readily accessible and easily comprehended. In a previous article¹ I have already considered this problem somewhat in detail. I mention it again in these columns because of its importance.

Such subjects of controversy as the relations of great industrial corporations to the public welfare, their services in production and the distribution of accruing benefits, are susceptible of handling in a similar statistical manner. An analysis of the difference between producers' prices and those paid by consumers will direct attention and scrutiny to the vulnerable items, if published in the public press.

When the fundamental character of the industrial organization and the danger of mass movements are fully understood, there will be clearer appreciation of the necessity for precautions to guard against the extreme pendulum swings of popular action.

The importance of accumulating reserves against emergencies has been better understood among business executives in recent years than it was a generation ago. If this had not occurred, the recent fall of prices would have been more disastrous in its effects. These periods are not without service in emphasizing the virtues of conservation and thrift. Each individual, whether he represents capital, labor, or management, who fortifies himself to withstand a period of depression, and to go through it on his own resources, has done his part to check the course and limit the effects of the reaction.

Finally comes the problem of strengthening the industrial organization; of co-ordinating its activities to promote both economy and stability; of safeguarding its operations by pro-

viding definite information for its guidance; thus eliminating to a greater degree the uncertainties and the exaggerations which are so largely responsible for the extreme movements. The more accurately the business world can be informed by its statisticians and its analysts about production in all branches, and about commodity stocks, current distribution, and consumption, the less likelihood there will be of any undue development that will carry it out of balance.

III

This field, wherein information is to be gathered, organized, interpreted, and put into shape for the guidance of the business executive, is the field of the statistician. It is a field for more than routine work in accounting: it is a field for scientific study. The work is that of mapping the industrial field, of plotting the wants and resources of society, and of setting those wants and resources over against each other in a manner so informing and so graphic as to secure the best practicable adjustment of one to the other.

With this end in view there is seen immediately the importance of current statistics—statistics promptly available, as for illustration, the current ginnings of cotton and production of coal, tonnage handled by the railways, bank loans and clearings.

Government statistics for current use, as a guide in immediate business operations, have been only recently supplied, and are grudgingly given now. The available coal supply has been one of the most important factors in the business situation during past years; but it came out a few months ago in the coal inquiry at Washington that the government appropriation for collecting the reports of current production having been

¹ See "Wealth—Its Use and Control" by George E. Roberts in *Administration* for January, 1921.

exhausted, the force of clerks employed in tabulating the returns has been paid by contributions from the treasury of the National Coal Operators' Association, that organization preferring to pay them rather than have the information discontinued. There are people who see a sinister motive in these contributions, but the information was vouched for and given to the public by the government authorities. It would be much better to have the entire service rendered by the government.

Collection of statistics by individual firms and trade associations is comparatively new, but rapidly developing. In this connection we have an exhibition of the prejudice against anything like co-operation, or anything that suggests a mitigation of uncompromising hostility, between competitors. Central bureaus of information for trades are understood to be under surveillance. It goes without saying that they should not be made a cover for illegal proceedings, but the collection and distribution of reliable information, of a class necessary to secure an approximate adjustment of supply to demand, is in the interest of stability and good service. With the development of industry to the scale upon which it is now conducted such information is necessary to intelligent and economical management. The idea that great industries, like those engaged in meat-packing for instance, should be required to ignore each other's exist-

ence, and conduct their own business without any information as to what the other is doing, is unreasonable and not in the interest of efficient public service.

The fear that any degree of co-operation in such matters will put the competitive principle in peril puts an exaggerated estimate upon their importance. The competitive impulse is more deeply seated, and a showing of unusual profits may be trusted to keep it alive. Here, as elsewhere, the remedy is not in suppressing information, but in full publicity for all information bearing on the subject.

IV

There is not the slightest likelihood that all the statistics that can be gathered will put an end to differences of opinion, but an increase of trustworthy information will raise the level of discussion, and tend to make it more constructive and enlightening. And so the possession of common information about production is not going to eliminate the ambition of men to attain positions of leadership. That is unquenchable, for, even if selfish motives are eliminated, the altruistic motive will take their place. The aim of society should be to bring the contests and the striving into the open, where they will excite either the cupidity or the emulation of others, but with faith always that the higher motive is to supersede the lower.

STANDARDIZATION OF STENOGRAPHIC WORK

BY R. B. NEWTON*

STENOGRAPHERS' fishhooks—how large a part they have in our workaday world! And the stenographers themselves; they, too, have an important place.

Considering the brief and incomplete training the great majority of stenographers have received when they so call themselves—"two years' commercial" or "six months college"—and the faithful reliance placed upon them by many business men who should know better, the wonder is that they acquit themselves as well as they do.

The stenographic work, particularly in an organization of size, can easily assume the proportions of a problem. It can create a deal of irritation, bickering, some hard feelings, and even bitterness; not only among the stenographers, but among those they serve. No small amount of tact, organization, and executive ability is necessary in order that this essential part of the day's work may go on efficiently and pleasantly.

Consideration of stenographic work divides itself into two broad classifications: the institution where physical conditions and the nature of the business lend themselves easily to centralization, both of dictators and stenographers; and the organization in which this is not the case.

In the first may be grouped those institutions whose business is primarily a mail business, where correspondence is handled for the most part by men and women who devote their whole time and thought to it. There may be added to this group those institutions

of moderate size where physical conditions, the layout of the offices, etc., eliminate the disadvantages of distance. With the circumstances as they ordinarily exist in businesses of this type, the organization and standardization of the stenographic work is comparatively easy.

A more difficult situation is presented when the nature of the product handled demands rapid distribution; where telegrams are sent in volume; where the offices are scattered over many floors; and where the letters are written, not by a corps of correspondents, but by managers of small department units, whose letters constitute only a part of their work. Here the problem is to standardize not only the work of the stenographic department, but of all the office routine touching letters, which includes practically everything.

II

Saving for another time, perhaps, the discussion of the complex situations arising from such conditions, let us consider now the average office, where no attempt at centralization or standardization has been made, but where existing conditions and the problems they present are what might be termed normal.

In such an office we find the letter writers, whether they be correspondents, department managers, or assistants, scattered in what is considered the most logical arrangement for the conduct of the business. By each one is a stenographer, or, perhaps, by mutual preference, she is called a

* Correspondence Supervisor of the Basick Manufacturing Company, Chicago, Ill.

"secretary." Question the department manager or correspondent and you will find that the lady's presence there is an absolute necessity. The department couldn't function otherwise. The stenographer agrees wholeheartedly in this. "You see," the manager says, "I dictate all day, off and on, and I must have some one here."

It is not unnatural to give such a plea sympathetic consideration. At the same time, experience has taught that it is exceedingly difficult to accomplish anything in the way of general supervision of stenographic work under such circumstances. Even so, however, it may be that segregation would disrupt the work of the organization. Before making any definite move, therefore, it will be better to investigate rather carefully to see just what work is being done by each stenographer, and whether or not she is indispensable to the department.

With the aid of such a form as shown (Figure 1) an analysis of the work of each stenographer can be made. Ordinarily such an analysis, made from a daily report on this form for a period of two or three weeks, will disclose some rather startling facts. It will probably be found that expensive stenographers are spending much of their time on straight typing work, filling in form letters, enclosing circular matter, and other miscellaneous activities which might better be done by a less experienced girl or by an office boy. Inequalities will also be found in the other direction. Girls rated inexperienced and paid as such will be discovered turning out a large amount of high quality work. The injustices which exist along this line in an office of even moderate size are indeed amazing.

But the manager is never at loss for an additional objection. Upon being

shown the results of the survey, he will protest: "That may all be true, but I have just trained my 'secretary' to do my work as I want it done. The quality of work will suffer without the dictator's personal supervision." This seemingly logical objection has been shown a fallacy sufficiently often to be dismissed. In this connection, the following question was put to fifteen nationally known corporations: "How does the quality of work turned out from a centralized department compare with that of stenographers under the personal supervision of the dictator?" Only one expressed a doubt as to its being quite as good. Two replies, both from firms whose letters number into the thousands daily, are particularly interesting:

As a rule it's every bit as good and in many instances a great deal better. The reason for this may be explained by the fact that we are constantly on the alert to see that no one runs down at the heels in the matter of quality. A dictator who has his own private assistant often becomes a little indifferent as regards the appearance of his letters, and thereby falls into the habit of accepting almost any old thing that is handed to him.

I do not and never did approve of the plan of having stenographers work under the supervision of correspondents. This merely creates an atmosphere which has a tendency to cover up the shortcomings of both and is not productive of the highest efficiency in either.

One or two other questions naturally suggest themselves. Will centralization and standardization accomplish anything in the way of reducing expense? A glance at the conditions uncovered by the analysis will show possibilities in this direction. If the time spent by stenographers on other work were all devoted to stenographic work, the same number of letters could be produced by substantially fewer stenographers. Estimates of the sav-

ing in this connection, by the same fifteen organizations which were previously referred to, varied from 15 to 50 per cent.

III

A second query concerns the dictating machines. Can they and shall they be used? The merits of the machines and the drawbacks, such as they are, are sufficiently well known to require no discussion. The assumption is that their practicability to the organization will be investigated. It is further assumed in the discussion of the centralized department, that the dictating machines will be installed wherever possible.

Having settled on the advisability of centralizing all stenographic work, we come now to the problem of how best to change over from our haphazard way to the better way. Obviously there are only two possible procedures. Either we must go about it gradually, taking a department or group of departments at a time, or we must make the entire shift in one day. Each has its advantages and disadvantages. Making the change by easy stages tends to reduce confusion. At the same time, individuals are likely to feel that they are being discriminated against, and, by prejudice so engendered, to breed opposition which would not be manifest otherwise. Making a wholesale shift creates somewhat more confusion, perhaps, but not so much that it cannot be eliminated in the course of a day or two.

Where shall we put this department we have created, and what physical conditions must be given consideration? The department should by all means be distinctly apart from the rest of the office. The room should afford better than ordinary light, have excellent ventilation, and, so far as

possible, it should be free from the possibility of frequent distractions of any sort.

As to the physical arrangements, they should be governed by one consideration—convenience. The arrangement of desks is of some importance. For example, the arrangement of desks in rows of two each, with wide aisles between, reduces interruptions caused by cross-talk between the workers. All desks should, of course, face in the same direction. The supervisor should be located at the rear, near the main entrance, so that visitors may consult the supervisor without disturbing the department.

Desk equipment requires attention also to eliminate petty irritations and lost motion. We quote briefly from the directions issued by a company whose initial equipment consisted merely of the ordinary double and single pedestal flat-top typewriter desks:

For stenographers: To facilitate the typing arrangement, the two lower left-hand drawers should be combined into one and equipped with slanting compartments for holding carboned set-ups. Extracted carbon paper should be placed in second drawer on right side of desk. Pin and clip tray should be placed at right side of typewriter.

For transcribing machine operators: Rack set on top of desk immediately above and back of typewriter for holding carboned set-ups. Provide a rack also and a definite place on operator's desk for the cylinders to be transcribed and accompanying papers, and for cylinders which are transcribed. Pin and clip tray on right side of typewriter.

Other companies have worked out much more elaborate schemes as best suited to their requirements. Whether simple or elaborate, however, the one result to be worked for is convenience; the easier the work can be made, the better.

IV

It becomes necessary next to decide definitely how letters are to be written, and to formulate some general rules to guide the workers in their efforts to meet our expectations. These instructions must extend beyond the stenographers to the dictators themselves. The dictators, whether they use a stenographer or dictating machine should be carefully instructed, even though they have dictated letters for years, in the procedure which, combined with the new centralization, will work to greatest efficiency. The following paragraphs, taken from a booklet prepared for dictators, will serve as illustration:

Consider first your stenographer. Here you are dealing with a personality, which like your own is governed in efficiency and disposition by circumstances.

What you condemn as carelessness on her part may, after all, be lack of consideration on your part. For instance, did you know that it worries many stenographers into inefficiency to have the dictator glare at her when dictating, or to watch the short-hand notes she is making? Do you slur over little words? Do you start a sentence briskly only to dribble to a faint nothingness at the end? Do you know what you want to say when you start your letter, or do you repeat and alter all the way through, until patching up a sensible letter from the notes taken is as trying as a Sam Lloyd puzzle, without the necessary day off? Do you give careful and complete instructions as to the way you want your work turned out? Last, but by no means least, are you numbered among the dictators who change their minds after the finished letter is in their hands, make the few changes, and hand the letter back to the stenographer with an air of, "How long, I wonder, must I put up with this stuff?"

Your agent, on the other hand, may be a dictating machine. There is no question but that the machine, if used rightly, will help in turning out a greater volume of first

class letters in less time than is possible, even with a most proficient stenographer.

But it is necessary to remember that a machine is a machine, and a dictating machine can repeat to the transcriber only what the dictator gives; no more, no less, and only as distinctly and completely as the material is dictated.

Test out the machine to learn at what speed your dictation is best recorded. Ordinarily a speed of 100 revolutions a minute will give satisfaction.

Be sure that the cylinder has begun to revolve, and the recorder is properly set before beginning to dictate. The first words of a sentence are sometimes lost because sufficient time is not allowed between releasing the thumb clutch and the beginning of dictation.

Best results will be obtained by speaking in a natural tone, with the customary inflections of voice, as in ordinary conversation. This will also aid the transcriber in punctuating. Do not speak abnormally loud, nor yet mumble your words. Speak distinctly, with careful enunciation.

Careful instructions to the operator are essential to good work. Try to forestall any questions which may bother her. Poor work is often the result of inadequate instructions by the dictator. Preface all instructions, changes, etc., by the word "operator." If you do not, the operator is practically certain to incorporate the instructions first in the body of your letter, necessitating the rewriting of perhaps an entire page.

Spell out unfamiliar words, foreign words, and proper names. Distinguish carefully in initials, where letters sound alike.

These are only a part, of course, of the instructions which are necessary.

Explicit instructions are required also for the stenographers and transcribers. Decide, first of all, what the mechanical make-up of your letters should be, the form to be followed and so forth. Then provide each stenographer with a photograph of model letters. If special forms are to be used for interorganization correspondence,

copies of letters written on the prescribed forms should be furnished. Back these up with definite, minute instructions concerning the placing and manner of writing the date, the address, titles, salutations, closings, etc.; for example:

The Date: The date should be placed immediately below "Chicago, U. S. A.," of the letterhead; centered so that it will not extend out on either side. The name of the month should be abbreviated (May, June, and July excepted) as follows: Jan., Feb., Mar., Apr., May, June, July, Aug., Sept., Oct., Nov., Dec. The number of the date should be written in figures, without "th," "nd," or "rd" following. The day date is followed by a comma, and the year written in figures. (Oct. 15, 1919.)

The Address: The appearance and accuracy of the address is an exceedingly important feature of the letter. Most people are particular, and inclined to be a bit touchy about their names. They want the name spelled correctly, even though the signature from which the name must be taken is many times illegible. This is equally important in addressing a firm or a corporation. Do not rely upon your memory or your powers of deciphering for the name; consult the letterhead of the firm, a directory, or some other accurate source of information.

Do not take liberties with your reader's name. Be sure at all times to write the name as it is signed. For instance, if the name is signed "James H. Smith" do not abbreviate to "Mr. J. H. Smith," nor to "Mr. James Smith," nor to "Mr. Jas. H. Smith."

Occupational Title: You cannot possibly go wrong by using the occupational title held by your reader; such as "President," "Secretary," "Superintendent," "Purchasing Agent," "Office Manager," etc. This title should follow the name, commonly on the same line.

Street Address: The second or third line of the address (depending on whether individual, firm, or individual within a firm is addressed) is occupied by the street address—if one is given. Spell out the building number if under ten:

Nine East 16th Street,
except when a room number accompanies the building number:

1420, 10 So. La Salle Street.

Spell out the direction, North, East, South, and West; also the words "Street" and "Avenue" unless by so doing the line becomes ungainly.

City and State occupy the last line of address. The city should always be written in full; the state may be abbreviated except in the case of the short names; such as Iowa, Utah, Ohio, when it is better to write in full.

The address should always occupy three lines. When only an individual is addressed, or a corporation without street address, the name of the town should occupy the second line, and the state the third line.

Summarizing, we have:

Mr. James P. Thurson, Secretary,
The Union Chemical Co.,
Nine East 16th Street,
Boston, Mass.

Messrs. Harrison & Ford,
347 Milwaukee Avenue,
Cincinnati, Ohio.

Mrs. Norman C. Good,
Barrington,
Illinois.

Body of Letter: Study the models given. Abbreviations have no place in the body of a letter. Time saved by promiscuous abbreviating of words and titles is at the expense of the appearance, good taste, and effectiveness of your letter.

Closings: Unless the closing for the letter is dictated, use "Yours very truly."

The accepted usage at present is to place "Yours" at the beginning rather than at the end of the complimentary close. Do not sign a letter

Very truly,

Truly,

Respectfully;

"Yours" should always be included.

Sign all letters going outside the organization:

Samuel & Co.
which is the corporate name. Do not spell out "company."

Though the supervisor will be responsible for the appearance of letters, it will be well to make known just what is expected, the attitude to be assumed toward erasures, struckover letters, etc. The care of the typewriter is another matter for careful instruction. Other similar subjects will quickly suggest themselves.

V

With these preliminaries taken care of, attention may be given to the department as now organized. A natural division of the work is as follows:

Stenographers, subject to call from the general offices.

Transcribing machine operators.

Typists, for form letters and miscellaneous typing work.

Order writers and such other routine mechanical workers, including invoices and billing, which the office system makes it desirable to include.

The first problem to arise is likely to be that of lopsidedness in the work, particularly in connection with the first two groups. For instance, a stenographer, on answering a call, may report to a department manager whose work, due to his absence from the office or for other reasons, has piled up. He may have dictation which will require several hours. Shall he be permitted to give his entire work to one girl, and "load her up" for a day or two? There is a possibility in this case of an undesirable nervous strain on the stenographer; there is also the possibility that the stenographer will take advantage of the situation and allow the transcription of her notes to take an undue length of time. A better course is to send a relief stenographer after a specified time, say an hour. Even if two or three such reliefs are necessary—so long as sending them does not interfere with

prompt handling of the work of other dictators—it will be better. By this process, the delinquent dictator can clean up all his work and get back his letters ready for signature on the same day. If, on the other hand, one girl attempts to do the whole thing, twenty-four hours at least will doubtless elapse before all the letters are finally typed and back on the dictator's desk.

Some institutions find it helpful to have a specified length of time any stenographer may be out on a call. Others allot a specific hour for each dictator, and demand that he arrange his work so as to be ready for the stenographer when she reports to him. Either plan is good, but a definite recommendation is hardly in order, for a plan which would work very satisfactorily for one might be unwise for another.

Much the same obstacle must be overcome in connection with the transcribing section of the department. Here, perhaps, in greater measure than in the stenographic division, there is need for organization and standardization. First of all there must be a definite schedule for the distribution and collection of cylinders for the dictating machines. It is incumbent upon the department to see that the dictator has an ample supply of cleanly shaved cylinders at all times to cover his needs. It is equally important to have a schedule for the collection of cylinders. The natural tendency is for the dictator to allow his dictated cylinders to accumulate, which results in uneven work in the transcribing department, with consequent serious interference with discipline. The operators naturally respond better and are happier when work comes to them in a steady flow. They resent alternate periods of rush work and idleness. It will be seen that some organizing is likely to be necessary

outside the department, that the department itself may function properly.

It is essential, also, in the transcribing department to anticipate the difficulties which arise in connecting correspondence with the replies dictated. If all dictators were systematic in their work this would be unnecessary, but as they are not, it is safest to

put them all on the basis of the least systematic, just as a convoy is governed by the speed of the slowest ship. With the aid of Figure 2 these difficulties have been overcome in large measure. Attention is called particularly to two features of this form. By encircling the word "correction," in the first column, and continuing the line to indicate the point on the scale where the operator should listen for the correction, unnecessary work is avoided. Otherwise, an operator is likely to incorporate both the error and the correction in the letter before she is aware of it. In the same way, if a dictator sends to the department late in the day a cylinder containing a letter or two which it is important to have written immediately, he can encircle the word "today" and indicate the point on the scale where the dictation of the letter begins, enabling the operator to locate it immediately. The letter may be written and checked off, and the rest of the cylinder held

over until the next day. The double numbering helps to avoid disputes between dictator and transcriber as to whether the correspondence answered was sent to the department with the cylinder. By detaching the bottom part of the slip and attaching it to the folder containing the correspondence, immediate identification is possible.

Fair distribution of work is another point which must have careful attention. Very often a dictator will have decided views as to whom he wants to have do his work. It is not altogether bad to work on this basis, when possible. Generally, however, it will be found advisable to designate stenographers and to distribute cylinders to operators without discrimination. By this means all become equally familiar with the work and methods of the

dictators, and no one group or individual has more work than another.

It requires some time, of course, to reach any definite and fair conclusion as to the amount of work and the kind of work which may rightfully be expected from each stenographer and operator. Something of the nature of a job analysis will again be necessary, and here, once more, the form illustrated (Figure 1) may be used to advantage, as it is applicable alike to stenographers, operators, and typists. By means of such a record, kept daily, and a study

DICTATED BY: _____		Date: _____
DEPARTMENT: _____		Cylinder No. _____
		Con't. from No. _____
	Scale Cyl. Machine	Letter No.
		INDICATE—Extra Carbons Corrected Instructions
Correction	0	<p>Note</p> <p>CORRESPONDENCE SHOULD ALWAYS ACCOMPANY CYLINDER. When this is not possible, print name and address on this slip.</p> <p>NUMBER ALL LETTERS and indicate number of third column on this slip.</p> <p>USE INSTRUCTION COLUMN FREELY. The more explicit your instructions the better your work will be done.</p> <p>CYLINDERS RECEIVED AFTER 3:00 P. M. WILL BE CONSIDERED THE FOLLOWING DAY'S WORK, unless O.K'd by Office Manager.</p>
RUSH	5	
Correction	10	
TO DAY	15	
Correction	20	
CANCEL	25	
Correction	30	
RUSH	35	
Correction	40	
TO DAY	45	
Correction	50	4910
CANCEL	55	
Correction	60	
RUSH	65	
Correction	70	
CONTINUED ON CYL. No. _____		TIME RECEIVED: _____
STENOGRAPHER _____		TIME DELIVERED: _____
		4910
THESE PAPERS BELONG WITH DICTATION OF _____		
ATTACH THIS SLIP TO ENVELOPE.		
NOTE:—When on papers are sent with cylinder this slip should not be detached.		

FIGURE 2. SLIP TO CONTROL CORRESPONDENCE

of the carbons of work attached to it each day, it is possible to obtain a fairly accurate knowledge of the capabilities of each worker. When the reports for a month or six weeks are taken as a basis, it is possible to determine a fair average daily performance.

After this is accomplished, the only problem is to record each day's work to show how closely actual accomplishment is coming to the standard set. An excellent means of measuring the amount of work actually turned out by each member of the department is by means of a cyclometer attached to the typewriter, which registers the number of lines written. Grading of each member of the department can then be established by either the number of lines registered or by a system of points. For example, one cyclometer registers one point for every 240 depressions of the typewriter keys or spacing bar. Other systems of measurement are sometimes used. One plan will serve as well as another, so long as it is accurate and fair. Then, with the help of daily reports, such as shown in Figures 3 and 4, accurate check can be kept upon just what work is being done and by whom.

VI

The outstanding benefit of the standardization of stenographic work is that it permits of this unbiased classification of employees according to ability. Each one may be judged solely by results. Likes and dislikes, which so often work injustices, have no bearing. Whether wages are governed by piecework or not, a fair basis is established for determining remuneration. An operator or stenographer who can be relied upon to turn out a specific amount of good work falls automatically into the salary group for

that production. When greater speed and accuracy are attained, classification takes care of proper reward. Hence there are no jealousies, no talk of favoritism; employees are contented, and better work is obtained. Turn-over is lessened, and because outsiders soon learn of the fair treatment given, there is, under ordinary circumstances, no lack of material to fill vacancies that do occur. All this is as important to the administration as it is to the individual. The daily reports, moreover, furnish a sound basis for judging costs. For example, the work of a given department turning out 150,000 letters in a period of six months, costs, say, \$10,000. These figures, reduced to a monthly or weekly basis, and allowing for natural and unavoidable fluctuations, constitute a guide by which efficient management of the department at all times may be assured.

VII

Considering further the subject of governing salary entirely by the quantity and quality of work turned out, the following question was put to the fifteen national organizations referred to earlier: "Do you have a sliding scale of wages for stenographic employees based on production? If so, are they happy in this arrangement?"

Six reported that they had such a plan in operation; nine reported negatively, one of the latter, however, stated such a plan was under consideration. Some of the answers to this query are very interesting as in the following:

Our operators work on an hour rate until they become proficient, when in lieu of a raise in hour rate, they are placed on a piecework basis. They earn such good money on piecework that they are not tempted to leave our employ for this reason.

We have a "Rate Schedule" based on the rate of output and the salaries of the opera-

tors are automatically adjusted every six months.

We pay our operators on a straight piece-work basis of \$1.27 per 100 points as measured by a cyclometer attached to the typewriter. As to our operators being happy, the only thing I can say is that I judge they are inasmuch as we have been able to keep our most experienced operators for years.

The work is standardized and a given wage paid for a given production, a bonus being paid for any over-production, the wages being increased as soon as the operator has shown her ability for two months to produce the amount of work required for the next higher wage. For many years this has proved to be a perfectly satisfactory arrangement.

There are so many ramifications in the work passing through the department that it is manifestly unfair to judge ability by daily production. One girl may be assigned to a department in which the work is comparatively simple, she can handle easily twice as many cylinders as the girl who handles correspondence bristling with technicalities and tabulated matter. However, there are many arguments in favor of the sliding scale where all the work handled is uniformly simple, and where indiscriminate distribution of work is feasible.

VIII

If all dictators and all stenographers could be depended upon to be uniformly conscientious about their work and their treatment of subordinates, there would be no need of supervision, no call for centralization, and no worry over standardization. But the "Golden Rule," while heartily endorsed as applicable to the other fellow, does not get the personal application it should. With stenographers scattered over an office, it is almost an impossibility, without serious injury to the morale of the office, to keep anything like accurately informed—during actual performance—as to what they are doing and how they are doing it. Once they are centralized, and definite standards of work and conduct are outlined, much better results are sure to be obtained, time-consuming practices are eliminated, justice is done to each individual, and responsibility is fixed for the proper handling and appearance of letters.

THE COURT OF PUBLIC OPINION

BY IVY L. LEE*

TO see to it that the people are fully, intelligently, and honestly informed is undoubtedly the chief aim of enlightened publicity. Yet it is often a very difficult goal to attain and its attainment requires both wisdom and skill.

The importance of efficient publicity service has been realized pretty generally among large business organizations, and there is a growing tendency on the part of smaller companies to carry on work of the kind in a less ambitious way.

Publicity, press agency, and propaganda are terms often used interchangeably, but the three activities are very different. Propaganda, of course, depends on publicity, but it carries also an implication of something being done in an underhand way, something that insidiously plants wrong ideas in the mind and has an ulterior motive.

Publicity, on the contrary, is a light-of-day proposition. It must have in mind a public service and be sound ethically, both in its purpose and its operation, for its object is education.

Publicity gets things done by carrying a truthful message to the mass of the people. It lines up public sentiment on the side of the right by showing the inwardness of great questions on which, without publicity, the people would be ill informed. It gets people behind philanthropic and moral movements, it brings enlightenment on great public questions, and it is the most dreaded of all forces by the evil-doer and the criminal.

It was not so many years ago that public utility corporations, such as railroads, traction lines, gas, electric light, and telephone companies, were targets of almost universal condemnation wherever they operated.

Today the public has a much better idea of public utility corporations. People have a much better understanding of their problems; and this understanding has been brought about through a changed policy of dealing with the public, the basis of which has been—the public be informed.

Outstanding examples that carry a lesson are the efforts made by the steam railroads of the United States and by the electric railroads of the United States, to bring their problems before the people in order that a well-informed public sentiment may exist that shall solve these problems in a way that will be of the greatest benefit to the public itself.

The example of large industrial or utility organizations has not been followed generally by smaller companies, although many of them have shown a disposition to take the public into their confidence and, indeed, have made sincere efforts in that direction.

While not all companies require a special counsellor, a number of them have delegated the work to an official or employee; someone competent to undertake the simpler phases of publicity, such as the preparation of statements for newspapers.

The activities of these non-professional publicity men have necessarily been restricted. As a rule, it is the service with a sympathetic interest and a desire to learn fundamentals that

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accomplishes most. Set notions and skepticism are scarcely an asset.

When the Norsemen discovered America, they had no compass. Yet the compass had been invented by the Chinese thousands of years before.

When, however, Mme. Curie discovered radium, the knowledge of her achievement was spread throughout the world as rapidly as cables and wires could carry it.

Mme. Curie's work could have been of no value to the world at large if her discovery had been known to her alone.

II

The war wakened all the nations to the important functions of publicity. For the first time in history, governments recognized that the war could be won only by the education of the people to the necessity of sacrifice.

England, as a nation, resorted to publicity early in the war. The conservatives of the "tight little Isle" were shocked with the cry, "Wake up, England!" painted on billboarding, carried throughout staid London streets by sandwich men, flashed upon screens, and called by megaphones from omnibus tops. That slogan got for Kitchener his first hundred thousand.

Artistic France established a *Maison de la Presse*, and appealed to its people by effective posters. "*On les aura*," the most famous of these posters, made the great French war loans possible and coaxed the golden louis and silver francs from the stockings of the thrifty but patriotic peasants.

Italy, where German propaganda was most insidious, established an office for domestic propaganda, and another office for foreign propaganda, with one of the chiefs as a member of the cabinet.

The American government was compelled to establish its own publicity organization—the Committee on Pub-

lic Information, with two cabinet officers as members.

Publicity is, after all, a modern method of education. It may even lay some claim to being called scientific, for it compares and classifies knowledge of publicity methods in order to weigh and test their effectiveness, just as the scientist weighs and studies the fruits of his research in order to attack the problems of the laboratory more effectively.

On the part of the press and the public of this country there has developed a universal demand that large organizations take the people into their confidence. Such organizations in the main have come to agree with that principle, but the problem of how to take the people into their confidence has not been so easy as it first seemed.

Take a great railroad for example. Clearly it could not permit any reporter who took the notion to do so to examine its books and its correspondence files. The chances are that even if the railroad did give such permission the reporter would not understand what he saw. Some of the most interesting and significant things in dry-as-dust files would pass unnoticed. Taking the people into one's confidence therefore becomes a matter of technique.

III

Assuming that the effort to take the people into one's confidence is genuine, the institution can proceed in only two ways: First, to answer all legitimate questions that may be asked, and, second, to volunteer information which the institution believes would be of public service and would be inquired about if the press and the public knew of its existence.

Hence, there have arisen what are known in many institutions as publicity departments and trained publicity

advisers, whose work amounts to a new profession. They have to do with public relationships as lawyers do with legal relationships. They interpret an institution to the people and they interpret the public to the institutions. Writing, editing, speech-making, publishing are technical incidentals.

A publicity adviser is not merely an adviser in the matter of media to be employed in getting information to the public. One of his most important functions is to determine in advance the effect of the written or spoken word or of a public act, to devise the most effective means of stirring the public imagination to grasp the significance of the facts presented.

Too often, as we have all seen, the individual, institution, or organization blunders, is attacked, keeps silent, or says or does the wrong thing and then resorts to the services of the publicity expert to undo what has been done and make the sullied waters clear.

The qualifications of publicity men

vary as widely as the qualifications of other professional men. Given a man with what may be called a social viewpoint, a man who has studied the art of expression, the meaning of words, typography in its countless phases, and the effects of various combinations of these upon public opinion, it follows that he can do better work than the men without these attainments.

If, in addition, he is a student of world affairs and has not only a liberal education, but that greater knowledge which comes from one's own efforts in the study of social, economic, artistic and political affairs, not only of his own city, state and country, but of the world at large, then we have a man from whom the best results in the profession of publicity may be expected.

Such a man takes the problems put before him and studies them intimately with a view to translating his new knowledge into forms that will be interesting and educative to the world at large.

PRACTICAL ORGANIZATION OF INDUSTRY

BY CLINTON E. WOODS*

PART II—APPLIED ORGANIZATION

WHILE there is no intention in this paper of going into the legal aspect of corporate organization, at the same time it is necessary to have a sufficient understanding of corporate organization to know the source from which is obtained official authority for the administrative control of a business. Such officers as president, vice-president, secretary, and treasurer are bound in their acts by certain corporate state laws, and as these offices are frequently of a dual nature, it is necessary to know to what extent their duties are governed by corporate laws as distinguished from routine business.

The words "President and General Manager," or "Secretary and Treasurer," or "Vice-President and General Superintendent," as a rule, appear on a letter-head; all of which are in reality dual positions bound, on the one hand by corporate laws, and on the other by routine business requirements. In analyzing the personnel of a business the mistake is often made of thinking that because a superintendent is also a vice-president he has some extraordinary powers as superintendent, when in reality he has no more license in his office of superintendent by virtue of being vice-president of a company than he would have did no such relation exist.

Combinations of this kind are the foggy spots in many organizations. The fact that the vice-president of the company is also superintendent of the plant has led many general managers to believe that on account of this dual

position the superintendent was not subject or subservient to the policies and administration of the general manager; when in fact he is just as subservient to the general manager in his capacity of general superintendent as any outsider would be. This same principle will apply to any combination throughout any organization. No matter what a man's position may be in one part of a business, he is subject to the gradation of authority in any other part just as if he did not hold another and different office above or below it.

An analysis of the requirements of a business as regards its activities and the authorities necessary to govern them should be made without reference to the persons who own or operate the business, and should be absolutely free from the influence of internal politics. In other words, the functions and activities of any organization should be analyzed and charted irrespective of who or what the officers or other individuals connected with the business are, and appointments should be made according to the experience and personnel required. In this respect an outside expert often has an advantage inasmuch as his mind is free from any influence or internal political prejudice resulting from personal acquaintance and long association with a business. In view of these complications the reader will recognize that the most difficult problem for the individuals of a concern to settle among themselves is that of organization, as unconsciously their minds wander to a consideration of who is who and what is what, and

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they invariably shape an organization to meet the exigencies of an existing personnel rather than its actual requirements, with the result that the organization is neither co-ordinated nor effectively controlled.

From the foregoing the necessity of first understanding at least the fundamentals of corporate organization is evident. Therefore, the detail of such an organization is herewith presented in summarized form.

A corporation is brought into existence by virtue of a state charter which is an authorization granted by the state to carry on a specific business of some kind. Hence, the statutory laws of any state governing corporations become a part of the charter.

All states have provided general laws for the securing of a charter; and for business corporations—that is, concerns doing a merchandising or manufacturing business as distinguished from public utilities corporations or financial corporations—the laws of the different states are largely the same.

A corporation of any kind cannot come into existence except by process of law in accordance with state requirements. Business corporations are in general governed by uniform laws and have, with rare exceptions, no special privileges. Their charter is obtained by certain persons called incorporators whose duty it is to carry out certain formalities required by law, thereby providing a foundation for establishing the active agents of a business such as the stockholders, directors, officers, etc., and to secure and perpetuate a name for the concern. Since the formulas for all such procedure can be secured from the secretary of any state, from any responsible law firm or from any one of several publications which have been written to on the subject, it is not necessary to go further into the question of securing a charter.

As soon as a charter is obtained the stockholders proceed to elect a board of directors, the number varying according to the nature of the business, but in no case may there be less than three. In most states it is necessary that directors shall be stockholders, although at common law it is not required in some states.

II

After a board of directors has been elected by the stockholders, they proceed to elect their officers and to formulate a set of by-laws which, having been adopted and ratified, become rules for operating the corporation, and specify the duties and responsibilities of the principal officers such as the president, the secretary, and the treasurer.

Since by-laws are the foundation of any general scheme or plan of industrial organization, it is important that the reader have some understanding of just what by-laws are and to what extent a satisfactory organization and its officers are governed by them. A set of by-laws rewritten largely from Conyngton's "Corporate Organization and Management" is herewith presented, which will be of great assistance in the study of corporate and administrative organization.

BY-LAWS

ARTICLE I—STOCK

Certificates of Stock

Certificates of stock shall be issued to each holder of full-paid stock, in numerical order, from the stock certificate book, be signed by the President and Treasurer and sealed by the Secretary with the corporate seal. A record of each certificate issued shall be kept on the stub thereof.

Transfers of Stock

Transfers of stock shall be made only upon the books of the Company, and before

a new certificate is issued the old certificate must be surrendered for cancellation. The stock books of the Company shall be closed for transfers twenty days before general elections and ten days before dividend days.

Lost Certificates

The Board of Directors may order a new certificate or certificates of stock to be issued in the place of any certificate or certificates of the Company alleged to have been lost or destroyed, but in every such case the owner of the lost certificate or certificates shall first cause to be given to the Company a bond in such sum not less than the par value of such lost or destroyed certificate or certificates of stock as said Board may direct, as indemnity against any loss or claim that the Company may incur by reason of such issuance of stock certificates; but the Board of Directors may, in their discretion, refuse to replace any lost certificate save upon the order of some court having jurisdiction in such matters.

Stock and Books of Account

The stock and transfer books of the Company shall be kept in its principal office in the City of State of and shall be open during business hours to the inspection of any stockholder of the Company. All books of account and records of the Company shall be kept in its office in the city of incorporation, and shall be open during business hours to the inspection of any stockholder or judgment creditor of the Company.

Treasury Stock

All issued and outstanding stock of the Company that may be donated to or purchased by the Company shall be Treasury Stock, and shall be held subject to disposal by the action of the Board of Directors. Such stock shall neither vote nor participate in dividends while held by the Company.

ARTICLE II—STOCKHOLDERS

Annual Meeting

The annual meeting of the stockholders shall be held in the office of the Company in the City of State of, on the second

Monday of January of each year at 2 P.M. if not a legal holiday, but if a legal holiday, then on the day following. At this meeting the directors for the ensuing year shall be elected, the officers of the Company shall present their annual reports and have prepared a complete list of all stockholders of record as shown by the stock books.

Special Meetings

Special meetings of the stockholders may be called at the principal office of the Company at any time by resolution of the Board of Directors or upon the written request of stockholders holding one-third of the outstanding stock.

Notice of Meetings

Notice of meetings, written or printed, for every regular or special meeting of the stockholders, shall be prepared and mailed to the last known post-office address of each stockholder not less than ten days before any such meeting, and if for a special meeting, such notice shall state the object or objects thereof. No failure of or irregularity of notice of any regular meeting shall invalidate such meeting or any proceeding thereat.

Election of Directors

The election of directors shall be held at the annual meeting of stockholders, and shall, after the first election, be conducted by two inspectors of election appointed by the President for that purpose. The election shall be by ballot, and each stockholder of record shall be entitled to cast one vote for each share of stock held by him.

Quorum

A majority of the outstanding stock, exclusive of Treasury Stock shall be necessary to constitute a quorum at meetings of stockholders. When a quorum is present at any meeting, a majority of the stock represented thereat shall decide any question brought before such a meeting. In the absence of a quorum those present may adjourn the meeting from day to day, but until a quorum is secured may transact no business.

Voting

Any stockholder entitled to vote may be represented at any regular or special meeting of stockholders by a duly executed

proxy. Proxies shall be in writing and properly signed, but shall require no other attestation. No proxy shall be recognized unless executed within eleven months of the date of the meeting at which it is presented.

Officers of Meetings

The President, if present, shall preside at all meetings of the stockholders. In his absence, the next officer in due order who may be present shall preside. For the purpose of these by-laws the due order of officers shall be as follows: President, Vice-President, and Treasurer.

The Secretary of the Company shall keep a faithful record of the proceedings of all stockholders' meetings.

ARTICLE III—DIRECTORS

Number and Authority

A Board of not less than three or more than five directors shall be elected, who shall have entire charge of the property, interests, business and transactions of the Company, with full power and authority to manage and conduct same.

Qualifications

No person shall be elected nor shall be competent to act as a director of the Company unless he is at the time of election the holder of record of at least one share of its stock. At least one of the directors of the Company must be resident in the State of

Vacancies

Any vacancy occurring in the Board of Directors may be filled for the unexpired term by a majority vote of the remaining members. In event of the membership of the Board falling below the number necessary for a quorum, a special meeting of the stockholders shall be called and such number of directors shall be elected thereat as may be necessary to restore the membership of the Board to its full number.

Regular Meetings

The regular meetings of the Board of Directors shall be held in the office of the Company, in the City of, at 4 P.M. on the second Monday of each month, if not a legal holiday; but if a legal holiday, then on the day following.

Special Meetings

Special meetings of the Board of Directors may be held at any time in the office of the Company, in the City of on the written call of the President or by a majority of the Board. Special meetings may be held at any time and place and without notice, by unanimous consent of the Board.

Notice of Meetings

The Secretary shall notify each member of the Board of all regular or special meetings by mailing to each member's last known address, postage prepaid, at least five days before any such meeting, a written or printed notice thereof, giving the time, place, and in case of special meetings, the objects thereof, and no other business shall be considered at any such meeting than shall have been so notified to the members. No failure or irregularity of notice of any regular meeting shall invalidate the same or any proceeding thereat.

Quorum

A majority of the Board of Directors shall constitute a quorum and a majority of the members in attendance at any Board meeting shall, in the presence of a quorum decide its action. A minority of the Board present at any regular or special meeting may, in the absence of a quorum, adjourn to a later date, but may not transact any business until a quorum has been secured.

Election of Officers

At the first meeting of the Board of Directors after the election of directors each year, a President, Vice-President, Secretary and Treasurer shall be elected to serve for the ensuing year and until the election of their respective successors. Election shall be by ballot, and a majority of the votes cast shall be necessary to elect. The directors shall fix the compensation of officers subject to the limitations of the Charter and By-Laws. Any vacancies that occur may be filled by the Board for the unexpired term. The Board shall have the right to remove any officer for cause by a majority vote of the entire Board.

Compensation of Directors

Each director shall receive the sum of ten dollars as compensation for his attendance

at any regular or special meeting of the Board of Directors, and shall receive no other salary or compensation for his services as a director of the Company.

Power to Pass By-Laws

The Board of Directors shall have no power to amend, alter, or repeal the by-laws, but may pass such additional by-laws in conformity therewith as may be necessary or convenient to facilitate the business of the Company.

ARTICLE IV—OFFICERS

The President

The President shall be the chief executive of the Company and shall exercise general supervision and administration over all its affairs. He shall when present preside at all meetings of the stockholders and Board of Directors, and shall appoint all special or other committees unless otherwise ordered by the Board of Directors. He shall sign and execute all authorized bonds, contracts, agreements and other obligations in the name of the Company, and shall with the Treasurer sign all certificates of shares in the capital stock of the Company and when necessary all checks and vouchers.

He shall submit a complete report of the operations of the Company for the year, and a statement of its affairs as of the thirty-first day of December preceding, to the directors at their first meeting in February and to the stockholders at their annual meeting each year, and from time to time shall report to the Board all matters within his knowledge which the interests of the Company may require to be brought to their notice.

He shall be ex officio a member of all committees and shall have the general powers and duties of supervision and management usually vested in the President of a corporation.

He shall as far as may be possible and desirable, familiarize himself with and exercise supervision over the affairs of any other corporations in which this corporation may be interested.

He shall freely consult and advise with the various committees and their chairmen in regard to the business and interests of the corporation.

The Vice-President

The Vice-President of the Company shall, in the absence of the President be vested with all the powers of the President and be required to perform all his duties. He shall perform such other duties as may be prescribed by the Board of Directors or President.

The Secretary

The Secretary shall be sworn to the faithful discharge of his duties; shall keep full minutes of all meetings of the stockholders and Board of Directors, and shall perform the same duty for any committee when required; he shall give due notice of all meetings of stockholders and directors, and shall notify all newly elected directors and officers of their election; he shall have charge of the seal of the corporation and affix the same to certificates of stock when such certificates are duly signed by the proper officers, and shall affix the seal, attested by his signature, to such other instruments as are duly authorized by the Board of Directors.

He shall have charge of the stock certificate books, the stock transfer books and stock ledgers, and such other books and papers as the Board of Directors may place in his care.

He shall make such reports to the Board of Directors as may be required of him, and shall prepare or have prepared such reports and statements as are required by the State laws. He shall also make out, twenty days before any election of directors by the stockholders of the Company, a complete list of the stockholders entitled to vote at such election, arranged in alphabetical order and giving the number of shares of stock that may be voted by each at such election, and he shall keep said list open to inspection at the office of the Company until the time of and during the said election.

He shall perform all such other duties as are incident to his office or as may be assigned him by the Board of Directors or President.

The Treasurer

The Treasurer shall be the custodian of the funds and securities of the Company,

except as otherwise directed by the Board of Directors, and shall be responsible for all moneys and other property of the Company under his charge; he shall keep full and accurate records and accounts, in books belonging to the Company, of all receipts, disbursements, credits, assets, liabilities and general financial transactions of the Company; he shall deposit all moneys and other valuable effects of the Company coming into his hands in such depositories as may be designated by the Board of Directors. His books and accounts shall be open at all times during business hours to the inspection of any directors of the Company.

He shall disburse the funds of the Company as may be ordered by the specific or general instructions of the Board of Directors, taking proper vouchers for all such disbursements; he shall endorse for collection or deposit all bills, notes, checks and other negotiable instruments of the Company, and deposit the same to the Company's credit; he shall sign all receipts and vouchers for payments made the Company, and shall, jointly with such other officers as may be designated, sign all checks made by the Company; he shall sign with the President, or with such other person or persons as may be designated for the purpose by the Board of Directors, all bills of exchange, promissory notes and bonds of the Company, and shall sign with the President all certificates of shares of the Company's capital stock.

He shall give bond to the Company in such sum, and with such sureties, and in such form, as shall be satisfactory to the Board, for the faithful performance of the duties of his office, and for the restoration to the Company in the event of his death, resignation or removal from office, of all books, papers, vouchers, money and other property of whatever kind in his custody and belonging to the Company.

He shall render to the directors, as called for, all such statements and accounts as may be required of him; shall prepare an annual report showing the financial condition of the Company on the thirty-first day of December in each year, which report when made shall be presented at the next succeeding meeting of the Board of Directors, and

at the annual meeting of stockholders, and shall make such other reports and do such other things incidental to his position as may be required of him by the Board of Directors.

The by-laws as given above are a simple set for a comparatively close corporation. When by-laws are drawn up for a large corporation, with perhaps many plants scattered all over the country and with numerous works managers and managing committees, it is, of course, necessary to prepare a much more extensive set of by-laws than has been illustrated, as naturally the business and physical requirements of such an organization are on a very elaborate scale and can be controlled only by much detail on the part of the executives. The by-laws given above, however, will serve to show the origin of officers and official authorities, and in preparing any scheme of organization one of the first duties of an industrial engineer is to make himself familiar with the by-laws of the corporation, so that he may know how to clothe the personnel of the organization in its proper authority.

In some instances by-laws specifically state that a general manager, or a comptroller, or a general superintendent shall be elected by the board of directors, while other by-laws make no mention of this, and men are appointed to such positions by the president. In other cases there is an executive committee to pass upon the hiring of all men whose salaries exceed some given amount in the same sense that an executive committee will pass upon all expenditures that are to be made over and above a certain amount. All this, of course, is a matter of detail, but detail which should be clearly set forth in the by-laws or general rules under which an organization is operated and which forms a necessary connecting link between the daily routine and

operation of a plant and the authorities which constitute the governing powers of that plant.

III

The term "business organization," which is commonly accepted for manufacturing plants, would be much more expressive if called "industrial organization," inasmuch as it covers all industrial activities and authorities.

To illustrate organization of such a kind a chart has been made showing the complete organization for a manufacturing business. It has been designed with the idea of classifying all the different experiences required for purposes of manufacture with the necessary authorities to govern them. While this chart is largely fictitious, it has been purposely made so in order to take in as many situations as possible, so that it may be referred to in connection with any and all manufacturing requirements. In connecting the chart, however, the manufacturing requirements for automobile work were used as an outline, as this class of manufacture embraces a larger variety of trades and experiences than almost any other branch of production.

The chart represents a complete scheme of departmentalization in which all experiences, activities, and functions are covered by departmentalized authorities. In each instance there is some work to boss and someone to boss it, which is the true basis of any organization.

The organization outlined on this chart is divided into three prime groups, namely, the executive group, the comptroller's group, and the general manager's group. The executive group is divided into its executive officers whose duties have been clearly described and defined in the foregoing by-laws. The last two groups which

are not commonly governed by by-laws are divided into twenty subdivisions and seventy-six departments, as illustrated and named on the chart; seventeen divisions and sixty-four departments coming under the general manager, and three divisions and twelve departments coming under the comptroller. The circles represent groups, the horizontal blocks divisions, and the vertical blocks departments; a group meaning prime authority, a division meaning general authority by virtue of the fact that it has under it several other authorities, and a department meaning a single or individual authority over a special kind of work.

The description of officers' duties, etc., as set forth in the foregoing by-laws will suffice in the present instance for their work. Therefore, it now becomes necessary to examine and describe the duties and relationships of all the other authorities in the organization coming under these executives, the first of which is the comptroller.

The two prime groups that come immediately under the executive officers are those groups represented by the office of comptroller and the office of general manager; and in so far as value of authority is concerned these two offices should be placed on a par with each other. The division of authority, however, should be very sharply and clearly drawn, because this is the first deputization of executive authority.

Primarily, all managerial control in a manufacturing business of any size is divided into these two groups, which should be made to balance each other. First, there are the producing activities of the business, including the production of goods by process of manufacture and the production of profits by virtue of sales. These are under the control of the general manager who has charge of everything relating to manufacture and sales.

some classified method of order control, for such usage of properties or stores.

These two prime divisions of the business are well represented on the chart, balancing, almost like a pair of beam scales, the organization in its entirety; one end controlled by the general manager, the other by the comptroller. A comptroller is the custodian of a company's materials and properties and must render an accounting thereof, while a general manager is the manipulator of these materials and properties for the purpose of making profits. The one controls the handling and the other the value of these materials and properties; and the chart shows how such control is organized, deputized, and supervised by these two men.

The first line of the chart is the one running from the comptroller to the production engineer, division 304, showing the relationship between production control, order-cost work, and the comptroller. This, however, is not a line of authority but of association, as it comes from the side of the group circle and not from under it.

The next line is one of authority connecting the comptroller with division 21, manager of insurance, which is divided into two departments. The department for plant insurance covers not only property but liability and all other insurance except stock insurance, which in large plants requires the attention of a special man because of the wide variations in stock values from time to time.

The next line connects the comptroller with division 22, the general purchasing agent. Since the comptroller is in charge of all inventories up to the time of their usage for some particular purpose and also has charge of all finances and disbursements, it is absolutely necessary for good organization

and conservative procedure that the purchasing department be directly under the comptroller and that the purchasing division have under it the receiving, storage, and recording of all purchases that are made. In other words, the comptroller acts as a general merchant for the plant, selling it any and all materials for any and all purposes when duly authorized requisitions are made upon him for such items.

However, the general purchasing agent works under a dual authority inasmuch as he is also subject to the direction of the works manager for the physical handling of materials and the transportation of materials to various points in the factory, in accordance with the details specified for such work.

The question has arisen repeatedly as to the advisability of dual authorities. In a case of this kind, however, it is absolutely unavoidable inasmuch as the help employed by the comptroller differs so materially, in class and character, from that employed by the works manager that it is necessary for the comptroller to be in direct command of the employment department. This argument holds also in the case of the works manager.

The next line connects the comptroller with division 20, the chief accountant, under whom there are six departments. The chief accountant deputizes his work to five different heads, he being in direct charge of general accounting, as shown on the chart, while the departments for cost and statistical work, pay-roll, distribution, collection, and billing are each presided over by a special authority under the direction of the chief accountant.

The next line runs from the comptroller to division 300, the employment manager. Here we have a dual authority inasmuch as the employment manager is in one instance under the comptroller and in another under

the works manager, who in turn is under the general manager. This division is also divided into special departments, the hiring and transfer departments being under the direction of the employment manager himself, while the welfare and hospital work is under the direction of specialists in those lines.

In its full sense comptroller means one who has control of a business by virtue of the fact that he has charge of all finances, all accounting, all inventories and inventory taking. At one time he was considered to have full and complete charge of and to be the authority for the installation of any and all systems and methods required for the conduct of a business in order that all the detail of the business might be focused in the answers required by his general accounting system. Later-day practices, however, have very considerably changed this, as new methods of production control have made it not only desirable but absolutely necessary that the production engineer, in so far as production control is concerned, should be the author of and sole authority for any and all methods required for handling and processing work through a factory. This has led to a great deal of conflict, many disputes, and in some instances to serious complications in the workings of an organization, due to the fact that old-time accountants have not been willing to work along such lines; but the true necessities of the case are gradually making themselves felt and understood, and at present there is much less conflict over this change than there has been heretofore.

In analyzing the various departments that come directly under the chief accountant who in turn is under the comptroller, it should be borne in mind that not all concerns will have a separate department for each class of

work done, as for instance, a separate one for billing and another for collections, etc. Work of this or any other character is never departmentalized as a separate activity unless there is a sufficient volume to warrant specific supervision.

IV

With an organization so well defined as the one herewith presented the duties of the comptroller should be written into the by-laws in the same way as for the treasurer. The following provision, therefore, should be added to the by-laws:

The Comptroller

The Comptroller shall have entire charge of all books of account and supervision over all books, papers, and records pertaining thereto; and shall examine all vouchers and audit all accounts.

He shall have charge of and be responsible to the Treasurer for all work done in the following divisions and departments under same:

- Division No. 20, Chief Accountant
- “ “ 21, Insurance
- “ “ 22, Purchasing

He will be in charge of all insurance matters, all general accounting, final cost and statistical work, pay-roll work, distribution of expenditures, collection, billing, purchasing, receiving, general stores, and stores records; and in so far as his requirements for labor are concerned he will be in direct charge of Division No. 300, Employment.

He will be responsible for all systems and methods in the business that in any way affect general accounting and office work connected with same, and no changes in such systems or methods can be made or forms introduced in connection with same without first being O K'd by the Comptroller.

He shall keep such records of the business as will at all times show its financial condition, and shall verify the assets reported by the Treasurer and make report of same to the President.

He shall compile and furnish to the President and Treasurer such written or statistical reports or other information as they may require from the departments under his direct jurisdiction.

It shall be his duty to verify all cash disbursements and countersign all checks issued by the Company.

He will be required to furnish such forms of daily digest in connection with the business as a whole as may be required by the President.

In case of default of any kind coming within his information he shall immediately report same to the President.

He shall also perform such other business as the President or Treasurer may from time to time direct.

The organization as shown for the comptroller is ideal in its character inasmuch as there are at least three division heads who might ultimately qualify for the office of comptroller; that is, the production engineer, the general purchasing agent, and the chief accountant, preferably the last. But in this respect as in all other points on the chart, gradation in the organization is shown, and opportunity is provided for promotion from the departments to division heads and from the division heads to groups.

The general manager is usually considered as an officer of the company, but he is not an executive officer unless his office is combined with that of president, vice-president, secretary, or treasurer, for the reason that he usually has little or nothing to do with general corporate affairs or finance, being generally appointed to take charge of ordinary business transactions in connection with an industry. It is unfortunate that many general managers in their management of affairs exceed the authority of their office for lack of definite instructions to work by. The general manager is appointed by a board of directors who should be responsible to the general manager for

the work he is to do, inasmuch as they should prescribe in detail his duties and the arrangement of authority for the conduct of his office.

Custom and usage have attached many things to the office of general manager that are really not within his jurisdiction and which have never been covered by any statutory provisions. Therefore, it is of paramount importance to all boards of directors, that their by-laws prescribe the official power and duties not only of the corporate officers, but of the comptroller and the general manager as well. In some states the law is such that a man holding the office of general manager renders himself personally liable for exceeding his authority unless his acts are ratified by the board or corporate officers, and also makes himself liable for any misstatements, false representations, or incorrect information concerning the business that may emanate from him. In some states there are statutes prescribing what the penalties will be for misdeeds, but wherever the directors of a company permit a general manager to exercise authority in the handling of a company's business the corporation is bound by his acts just as fully as if the acts had been authorized.

It should also be understood that the validity of a general manager's acts does not depend upon the place where authority is used; therefore, his order or contracts are as effective in one place as in another. In order to remove all uncertainty from the office of general manager his duties and responsibilities should be clearly described in the by-laws. However, if for any reason they are not written into the by-laws, they should be formulated by way of instructions from the president or the board of directors to the general manager upon his acceptance of the appointment.

V

Referring again to the chart on page 746, it will be seen that the office of general manager is one that is purely executive inasmuch as he delegates all of the selling to a business manager and all of the manufacturing to a works manager. Therefore, his position naturally becomes an executive one in this case for the simple reason that the office of general manager here represents a group deputation on the part of the executive authorities. In other words, this is an office not of detail but of generalities, of policies, of conferences as between the executives and the active agents of the industry or any committee it may have, and calls for a man possessed of broad experience and a wide horizon in his view of things.

Primarily, a general manager's work consists of two things: first, the manufacture of goods with which to make sales; second, the selling of these goods. To these two points he devotes his entire attention. Back of them, of course, there is a tremendous amount of detail which is deputized to various men or agents employed for specific purposes.

In order to carry out these two great objects the general manager must necessarily work according to the policies agreed upon as between himself and the corporate officers of the company. Therefore, fundamentally, he assumes direct responsibility for the kind and quality of product that is to be manufactured, and indeed in many instances he is employed because of his intimate knowledge concerning the product made and its market.

As a direct duty and responsibility the general manager has, first, to see to the promotion of sales; that is, the creation or setting of sales prices, the establishment of policies governing

credits and terms of payment, the establishment of all policies regarding advertising particularly as concerns expenditures and character, the creation of sales zones or territories and the allocation of agencies, the setting of salaries and commissions, the expense allowance for various employees, agencies, etc., and the establishing of branch offices, all of which are outside elements in so far as any definite organization is concerned.

The second interest of a general manager is the manufacture of goods with which to make sales. This covers a range of activity that is almost endless in its investigation and statistical requirements, as he is responsible for the economical production of goods and with it the labor, material, and equipment requirements that arise in connection with production. Through his works manager and the engineers of the plant he must keep himself posted on all items relating to factory improvements in connection with equipment, and on all questions pertaining to the handling of labor. Further, as a broad general principle, the general manager must be thoroughly posted on the market conditions of materials as regards not only prices, delivery, etc., but quality as well, so that he may make or have made contracts of such a nature as will insure a source of supply equal to his requirements for manufacture. From this it is evident that while the actual purchase of goods falls within the province of the comptroller or his purchasing agent, the purchases are made absolutely according to the specifications furnished by the divisions or departments coming directly under the general manager.

His next interest, of course, has to do with questions of finance, as he is held absolutely responsible for all expenditures made that come within the province of his authority. This brings up

the fact that he assumes responsibility for improvements, extensions, or betterments to the plant, and must make requisitions for appropriations for all such work, usually in such a way that he can draw on these appropriations to meet his requirements from time to time. The policies for the quantity and kind of output will usually be settled between the general manager and the corporate officers or executive committee. With anything like accurate costs, this naturally establishes expenditures that will be required for labor, material, and expense, and once such a policy is established the general manager should have a perfectly free hand in making these expenditures, the actual work of accounting for them coming under the comptroller.

Hence, it is necessary that the comptroller and the general manager work together to the extent that the comptroller will furnish the general manager daily, weekly or monthly statements as regards progress that may be required; and that through the superintendent he will be furnished daily, weekly or monthly reports on production, and at least once a month a statement regarding the business as a whole, so that he may see not only what he is producing in the way of output, but also what he is producing in the way of profits.

As a matter of fact the organization illustrated by the chart provides for all of these matters, as with the comptroller working on one side of the corporate officers and the general manager on the other side, the real duty of the corporate officers is to maintain a balance between factory activities and finances.

The foregoing paragraphs give some idea of what the office of general manager is in a corporation of reasonable size. They also show how many things the general manager has to look after and take care of outside of the

routine detail of making and selling goods; and how very necessary it is that he deputize these latter things to men thoroughly qualified to handle and control the details incident to manufacture and sales. As said before, in this case there are but two men under him with whom he comes in direct contact; the works manager and the business manager. This makes good organization, as either one of these men is in line for promotion to the office of general manager.

VI

Under the business manager are shown three divisions: one governing the general details of office work and coming under a chief stenographer who has charge of all typewriting, filing, mailing, etc.; the next being a general sales agent who has charge of all advertising and sales work, the sales work being divided into domestic and foreign, parts and repairs sales, and branch offices; the third division is in charge of the chief order clerk who takes care of the handling of all orders that come in from the sales department and who is directly connected with the shipping clerk in order that he may have authority in specifying shipments, deliveries, transportation, etc. This also is good organization inasmuch as there are three division heads here who might ultimately qualify for the position of general order clerk.

Many officers pay too little attention to the gradation in organization; that is, they do not organize in such a way that they have "growing timber" which can ultimately qualify to take the places of men higher up. The result is that without this provision organizations often become dependent on some two or three men, and these two or three men readily recognize this fact and often take undue advantage of the

manager. Nothing so strengthens a general manager's position as the fact that he can, if necessary, put his hand on capable substitutes for his chief subordinates.

The most interesting part of any organization commences with the works manager, as under him are more departmentalized activities covering functional, divisional, and departmental work than under any other one man in the organization; for a works manager is in direct control of all kinds of trades and professions which must be co-ordinated and brought together for some common purpose. His position, therefore, is one of unusual importance in connection with authority, discipline, production, inventory control and accounting. The name "works manager" is almost synonymous with the term "general superintendent," the latter being used generally in connection with smaller plants, while the title "works manager" is nearly always used in connection with larger plants.

It is an exception when the general superintendent or works manager is an executive officer of the company, as he cannot be considered an executive of the company unless his office is combined with that of president, vice-president, secretary or treasurer. At the same time the qualifications required in a works manager are such that he is most decidedly what is known as an executive, that is, he must have capacity and ability to direct and control men.

Some men have attained to the position of works manager through sheer force of ability to work up through the various departments of business to the top. Other men have been made works manager simply because of their marked inventive ability; but the all-around works manager of today is usually a man whose experience has been founded on a thorough engineer-

ing education of some kind in conjunction with a natural ability to organize, deputize, and supervise work, to a greater extent, perhaps, than any other man in the industrial world, and therein lies the secret of success for any works manager—his ability to organize, deputize, and supervise.

As shown on the chart, page 746, the activities coming directly under the direction of a works manager are so far-reaching and diversified as to require what might properly be called a "departmentalized staff organization." In other words, the man holding this position must have at his disposal highly developed experiences of so many kinds that he has to employ men having these experiences as heads of various divisions; these heads constituting what in reality are his staff. In the larger plants, the works manager is usually appointed by the board of directors or executive committee because of some peculiar qualifications that entitle him to such a position. He should be a man of large enough experience to be a member of all committees organized by the company, except, perhaps, the committee on finance, for among the multitude of things that come under the works manager is the responsibility for plant design, product design, plant operation, and all questions pertaining to production including quantity and quality and labor control. From this it is evident that a works manager must have a highly specialized staff to cover the various questions involved under such an administration.

As illustrated on the accompanying chart the direct duties of a works manager are divided into eight separate and distinct units of organization, as follows:

1. Works Engineer,
2. Superintendent of Inspection,
3. Chief Engineer,

4. Production Engineer,
5. Body Superintendent,
6. Foundry Superintendent,
7. Production Superintendent,
8. Battery Superintendent,

with an additional divided responsibility over two other divisions, namely, the general purchasing agent and the shipping clerk. These groups are called "units of organization" for the simple reason that each unit represents a class of activities that is specific in itself. That is, the various kinds of departments required in each unit are correlated, as can be readily understood by a study of the different departments contained in each group.

This so well illustrates the direct activity of the works manager as hardly to need further explanation. In other words, there are ten people in all under him with whom he does business or comes in direct contact or, in other words, the works manager has divided his office into ten separate and distinct divisions. His business is to keep these various divisions co-ordinated and working together in such a way as to produce the desired results. The data concerning co-ordination and functional relationship, will be developed in a subsequent article on Systems and Methods.

These divisions are subdivided into various departments, of which a brief description is here given.

1. The position of works engineer calls for a man of unusual experience and, in many ways, of unusual ability, for the simple reason that he has a wide diversity of activities to take care of, having charge, as he usually does, of all plant construction, plant maintenance, and service requirements. As a result of this manifold responsibility he has under his direction men occupied at a number of different trades, especially building trades, most of whom are in a large measure controlled by Unions.

Therefore, among other things, the qualifications for a works engineer call for broad experience, tact, and diplomacy in handling difficult situations in labor and construction work.

The works engineer has charge of six departments, which are in themselves service departments for the entire plant. From an operating point of view, he controls all power requirements, shop transportation, fire and watch service, millwrights, plumbing and steamfitting, and electrical work, each of which is a separate trade in itself, and any one of which constitutes a general plant service as required for the whole of a factory. In addition to this, the works engineer usually has charge of all new construction work, and in a large plant there might well be added to this division three more divisions; one for carpenters, one for masons, and one for iron workers, each of which would need a foreman according to the experience required for the different trades. In a smaller plant, however, these trades would be consolidated with what would ordinarily be termed the "Millwright Department."

As a whole this division covers the plant preparation and plant service as needed from a constructional and operating requirement point of view.

2. The superintendent of inspection represents a highly specialized work and must be controlled by a man peculiarly experienced for the work to be done. In other words, a superintendent of inspection has got to be not only a gauge master, but a gauge designer, and must be thoroughly qualified in every way as regards the use of gauges or the making of measurements for the purpose of maintaining standard qualities in production. From an organization point of view he comes directly under the works manager, and he should have a chief inspector for each one of the producing divisions. Under

this chief inspector there should be such other inspectors as might be required for each one of the different departments in the division. In the chart on page 746 there are five departments shown, one for each producing division, each of which is governed by a chief inspector.

Inspection should always be independent of the producing departments as shown on the chart, because invariably if inspection is done under the supervision of superintendents or foremen who have direct charge of the work it fails to produce the results that are desired. In other words, it is a difficult matter to get any superintendent or foreman to condemn his own work, and if inspectors are under his direct supervision, the foreman of any department can pass work over the head of such an inspector, to the detriment of both the product and business. This division should include any and all inspection on materials and products.

3. The work of a chief engineer embraces a unit of organization in a plant that is peculiar unto itself, inasmuch as he should have charge of all preparatory work for production. Consequently, the chief engineer must be a man of wide experience in the use of machinery and tools and in the constructional features of whatever products his company may manufacture. Furthermore, he must above all else have a complete knowledge of how to detail drawings and make patterns so that in preparatory work of this kind it will fit not only into the constructional requirements, but also into the instructions necessary by way of data, figures, dimensions, etc., for the factory to work up. The chart represents a chief engineer's activities as divided into six different kinds of experiences.

(a) The process engineer, whose business it is to study the product by components, lays out the operations

required for processing and from these operations determines the character of equipment and tools required to process the work. It is also the work of the process engineer to provide whatever plant layouts may be required for the kind and quantity of equipment necessary to maintain a schedule of some kind and to specify all gauging points and gauges required for maintaining the fit and quality of the work.

(b) It is the business of the chief draftsman, who should have charge of the drafting department, to prepare any and all drawings according to the specifications of the process engineer, works engineer, etc., after they have been approved by the chief engineer when such approval is necessary. It also devolves upon the chief draftsman to keep all records in connection with drawings, blue-prints, photostats, etc., and under all ordinary conditions he would have charge of the blue-print room, and in many instances the photography that may be required in the plant.

(c) The pattern-maker should have charge of all pattern-making that may be required for either production or tools.

(d) A pattern loft clerk should have charge of the storage, classification, and handling of all patterns as between the pattern shop, foundries, etc., and should maintain a record of patterns and of all pattern movements.

(e) An experimental engineer, should have charge of all experimental and development work in connection with new products up to the time that they are ready to standardize for manufacture; and in some instances the experimental engineer should also have charge of all of the try-out work in connection with new tools before they are put into the factory for quantity production. In some lines of work the experimental engineer should have charge also of the development of all new methods for tooling, etc.

(f) A chief toolmaker, should have charge of the making of all tools, fixtures, jigs, gauges, dies, etc., in accord-

ance with specifications furnished by the experimental engineer or the process engineer. It should be understood that toolmaking, as required on the part of the various superintendents of the factory, should be done only after it is approved by either the process or experimental engineer.

From the foregoing it is easy to understand that the chief engineer should assume the responsibility of designing the product to be manufactured; specifying the equipment with which to make the product; making all patterns and tools for all operations required in the manufacturing processes and the development work pertaining to new lines of product or new lines and methods of tooling as conducted in the division of the production engineer; thus completing a unit of organization in preparation work that is entirely independent of regular manufacturing and processing operations.

4. The title "production engineer" is one that has developed in recent years and calls for a man who has had a broad experience in factory production and processing operations and also in accounting work, as the work of the departments coming under the production engineer forms a connecting link between factory activities and operations and their cost in so far as production is concerned. A plant is prepared for the manufacture of some given product by the works engineer; the product itself is designed and prepared for by the chief engineer. It is at this point that the production engineer steps in and takes control of the flow of production through the factory from the time it is drawn out of raw material stores until the time it is put into finished stores: his part of the work being to issue orders for production by quantities, kinds, lots, etc.; to work out the schedules required to get the full load capacity out of the plant;

to make time studies on all operations required and set rates; to follow the work through the factory from operation to operation daily and check it with his schedule requirements; and to have charge of the product in all intermediate states such as parts stores, foundry stores, forging stores, etc.

This unit of organization, as shown on the chart consists of the following five departments:

(a) The time, estimating and planning department, in which all time studies and time estimates both for schedules and piece or premium rates are worked out and from which all production orders which go to the factory emanate. This unit comes under this division for the simple reason that it is necessary for the production engineer to have first-hand information as regards the time it takes to do work by operations in order that he may control his schedules and the time periods governing them; also in order that he may get first-hand information as to whether the time set for piece or bonus rates is correct, so that he may make immediate adjustments in connection with either his schedules or these rates in case the estimating department has over- or under-estimated the time required to do any particular operation.

(b) The order time-keeping department. (See Chart.)

(c) The order cost department, in which all costs are closed up on production orders only, and in which a comparative cost record is kept of each different piece manufactured, all of which will be described further on in connection with cost work.

(d) The parts stores department, which comes under the production engineer, as he must have control of all parts stores in order to have an absolute control of production as regards schedules, quantities, etc.

(e) The forging and casting stores, as all drop-forging work and all castings should be costed out complete from the drop forge shop or foundry

and, as they are manufactured on a schedule basis for final requirements they come under the control of the production engineer, inasmuch as they are in a sense parts stores.

From the foregoing it can be seen that this is another complete unit of organization, but that this unit is governed by a dual authority since, where production and production requirements are concerned, the production engineer is directly under the works manager, but where his timekeeping, order costs, and inventory values are concerned, he is directly under the comptroller.

5. The body superintendent is in charge of the body-making for an automobile which, it is obvious, is a separate and distinct business or trade from any kind of metal work. In other words, it is a wood-working proposition and requires a highly specialized experience to control it, and this experience is divided into four secondary classifications, viz., body-cutting, body-shaping, body-making and then the priming and storing of bodies for subsequent operations, thus making another unit of organization as distinguished from all other units.

6. A new phase is here presented in organization inasmuch as the foundry superintendent has under him two general foremen; one for a brass foundry, which is a unit of organization in itself, and one for an iron foundry, which is another unit of organization in itself, each of which is divided into four general departments, each department being governed by a foreman under a general foreman, the general foreman being under the direction of the foundry superintendent, and he in turn being under the direction of the works manager. This might seem like a compound organization and the question might well be set up as to why a foundry superintendent was needed at all.

Why not let the general foreman act directly under the works manager? In a small plant this would be permissible, but as coremaking, moulding, cleaning, etc., are the same in each foundry and call for the same kind of labor, it is better to put all this labor under one superintendent, the difference in the experience between the two foundries coming on the part of the general foremen, one of whom must be an expert in the melting and mixing of brass, and the other in the melting and mixing of iron.

7. This division which the production superintendent controls is divided into nine different departments and relates to metal-working and product finishing as distinguished from wood-working and foundry work. Its operation requires highly specialized and specific experience. The divisions, as shown, are drop forging, a highly specialized experience, the body smith shop, the axle and wheel manufacturer, which is quite different from general machine practice, the general machine shop, in which all general machine work is done, but more especially the work of manufacturing motors, etc., then the assembling and testing room. This constitutes what would be specifically metal work. The next department shows a very different and highly specialized experience requirement in painting, under the head of "color and rub varnish work;" next finish varnishing, then trim shop, after which comes the final assembling and testing and then the final finishing, which constitutes the completed production and also a complete unit of organization inasmuch as it is a group of processing experiences, each being highly individualized, and in some instances complete in itself.

8. The division controlled by the battery superintendent is divided into three departments, required for the

manufacture of batteries. It constitutes another unit of organization requiring highly specialized experience, the three departments being shown, namely, plate room, forming room, and assembling room. There might be added to this, if the volume of work was sufficient, a final testing and packing room, but in this instance such work would be in the assembling department.

The final unit of organization is the shipping clerk. This division head has under him three departments, namely, warehousing and finished stores, that is, all completed stock up to the time of shipment; the packing department, which, as shown, does not have a foreman over it, but is directed by the shipping clerk himself; then the traffic department, which has charge of traffic either as required from the railroads or by local trucking. Therefore, the particular experience required here is a knowledge of packing, shipping and traffic requirements and rules and regulations.

The shipping clerk, like the production engineer, operates under a dual authority; for in so far as requirements for floor space, the general handling of work, packing, etc., are concerned, he is under the direction of the works manager, but where shipping orders are concerned he is under the direction of the chief order clerk.

VII

The numbering system as applied to the chart on page 746 is based on the Dewey decimal system, as for instance, for the financial group we have the number "2." Therefore, we know that any department commencing with the number "2" belongs under the comptroller.

Under this comptroller would be "20" which is the chief accountant. His departments run from 200 to 205.

Therefore, it can be readily seen that by this method of procedure identification as regards authority is perfectly simple over the entire organization. The operating group is covered by number "3." Everything coming under the works manager is designated by "30," and "31" designates everything coming under the business manager. This subdivides itself again into "301" for the works engineer, "302" for the superintendent of inspection, and "303" for the chief engineer, and so on for each individual group. In other words, there is a number that covers the entire organization and that is number "1" which belongs to the executive group. Everything that belongs under the comptroller in the financial group is covered by "2" and "3" covers everything that belongs under the general manager in the operating group. These subdivisions are of such a character that each unit of organization practically has a separate numbering system of its own, as for instance, any time ticket or requisition whose first three figures were "308" would be immediately recognized as belonging to the production superintendent's division, the department being indicated by 0, 1, 2, 3, etc., affixed to "308." There are many conveniences to this form of numbering, although it is not absolutely necessary in many cases; the principal one being group identification in unit organization for use in connection with tabulating machine methods of distribution.

From the foregoing description it is evident that in the laying out of an organization, the one great study is to ascertain what units of organization will be required, and then departmentalize them according to the various kinds of experience that may be required for handling the work coming under each different division. In other words, the chart represents a clean-cut

analysis of industrial departmentalization as distinguished from functional organization. The works engineer renders a service to the plant with all of the various kinds of experience that are under his direction. The chief engineer prepares all the production and equipment specifications for the plant and furnishes the tools with which processing is to be done. The production engineer takes control of the production by time periods, quantities, rate setting, etc., but neither one of these three engineers takes direct charge of any of the operating departments, leaving that to the various division heads and foremen to do, all of which lends to and makes possible a co-operation that can be obtained under no other form of organization, and all of which enables a cost system to be applied and a control to be obtained that it is impossible to arrive at on a functional basis of organization, as by this form of organization, departmental distributions can be made to the numbering scheme applied for the departments in such a way that it is very definite as regards the labor, material, and expense of each division and

each individual department under each division. Furthermore, an organization laid out like this presents very definite lines of authority and, with a proper identification system, for all employees. A control is obtained over them that can be obtained in no other way, as if a man's pass is covered by the number 3080, it indicates that he belongs to the drop forging department and has no business in any other department if he is regularly employed in 3080.

In connection with the control of the employees of an organization of this character it should be a cardinal rule that any employee of any one department while temporarily employed in another department immediately becomes subject to the discipline of the foreman of that department.

In other words, if 3080 is found in 3084, whether he is there on an errand of some kind or there of his own volition, he is subject to the direction of the foreman of department 3084 while therein. The reasons for this are perfectly obvious, as it lends to discipline for the entire organization and gives no man an opportunity to be a free lance.

SOME FUNDAMENTAL PRINCIPLES IN CONTROL OF COMMON CARRIERS

BY CLYDE O. RUGGLES*

FUNCTIONS which conflict with each other should not be exercised by one and the same body. This is a fundamental principle of administration. It would be neither wise nor proper for the School Board of Chicago, for example, to be engaged in the manufacture of school furniture, and at the same time have the responsibility of purchasing the furniture for the schools of that city. Corporations of a financial character do not permit the same person to hold the two offices of secretary and treasurer. Clearing house associations have a rule that no clearing house examiner can accept within a certain period, e.g., two or three years after his resignation from the position of clearing house examiner a position in a bank situated within a certain radius from the city in which the clearing house association is located. The early history of American railroads furnishes many examples of the fact that the operation and management of a railroad and of a construction company by the same board of directors, invites both dishonesty and inefficiency.

In the commodity clause of the Hepburn-Dolliver Law of 1906 it was provided that railroads ought not to be engaged in certain other lines of business because of the possibility of collusion between the carrier and such business to the detriment of other businesses not so favored by the carrier. Much objection has been raised against banker control of carriers on the theory that the making of profits

out of a railroad through financial manipulation might conflict with its efficient operation as a transportation system. Hence, the belief that the interlocking of the directorates of banking houses and carriers should be both limited and supervised.

Much has been said and published recently to the effect that inquisitorial railway regulation has gone too far. But it seems to be fairly clear that unless certain fundamental principles of administration are observed in the management of our railroads, more regulation of the inquisitorial sort will be needed. To determine the degree in which some of our railway regulation has failed to take account of these fundamental principles, it is necessary to make brief reference to railway service and the legislation concerning it during the past fifteen years.

II

Two knotty problems in connection with the regulation of railway service are to be found in the control over the exchange, interchange, and proper distribution of railway equipment, and in the regulation of the use of terminal facilities.

When the lines of carriers were short and confined to a small area, and when interstate commerce was of insignificant volume, the exchange and distribution of equipment was not a vital need. Indeed, the Interstate Commerce Commission in the first year of its existence upheld a carrier that refused a car to a shipper who desired to ship to a consignee located

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on another railroad. Although railroad practice in this respect changed long before 1910 it was not until that year that the commission completely reversed this early decision. But with the increase of railway systems to ten thousand miles and more in length covering a dozen or more states the interchange and distribution of equipment has become a very vital problem.

In 1907 the railroads were unable to move much of the traffic offered to them owing in part to their lack of control over the distribution of railway equipment. When the Interstate Commerce Commission held hearings at Kansas City, St. Louis, Minneapolis, and Chicago, it found that those areas which, speaking generally, produce raw materials were suffering most from the inequitable distribution of equipment. Grain, for instance, was being stored on the ground in the Northwest because cars could not be secured. In the Southwest, livestock driven to the stations was held there for weeks and in some instances for months, and then driven back to pasture because not in condition to market. In the South much the same trouble was experienced in the shipment of cotton. Railroad platforms were piled high with it. Cars could not be secured for the shipment of lumber and other commodities through the areas referred to. The president of the St. Louis Lumber Exchange testified before the Interstate Commerce Commission that it was impossible to sell lumber on contract. Schools and public utilities in some sections were without fuel and coal was taken from the tenders of locomotives to keep people from freezing. James J. Hill provided for the transportation of coal cars in passenger trains, in order to supply certain places with fuel.

Though the Interstate Commerce Commission considered the advisabil-

ity of making a recommendation to Congress in 1907 for legislation which would give the commission control over the distribution of equipment, no such recommendation was made at that time. Not until November 1916 did the commission again give serious attention to proposed legislation to control car distribution. At that time Commissioner McChord called the carriers together at Louisville, Kentucky to ask them for an explanation of the unequal distribution of railway equipment, which meant that in many instances coal mines were running only a day or two each week. As a result of the many difficulties which were brought to light in the Louisville hearings the Interstate Commerce Commission recommended, and Congress passed in May 1917, legislation giving the commission control over the exchange, interchange, return and distribution of equipment. The provisions of this act with some modifications have been embodied in the Transportation Act of 1920. Under this act the commission has the same authority as before. Is it probable that this legislation will be satisfactory? Is it not clear that the intention of the law is for the commission to step in only when it sees affairs are getting beyond the control of the carriers, that is, after the horse is stolen the commission is to lock the barn? Let us examine the reasons for the unsatisfactory conditions which frequently result from the unequal and inequitable distribution of railway equipment.

III

The shippers of this country may be roughly divided into two classes: a class of so-called "one-way shippers" and another of "two-way shippers." To the one-way shipping group belong producers of most of our raw materials,

grain and livestock. Coal mines also belong to this group. To the two-way shippers belong in the main, those engaged in manufacturing. Such shippers get many cars in under load, and hence are able to use them for outward shipments. The appropriation of equipment in this manner by this class of shippers was carried on to such an extent during the war that it was necessary to deny to them without the carriers' consent the privilege of using equipment by the unloading of inward shipments. As the one-way shippers must wait until they are able to secure empties through the regular channels of distribution, they are the first to suffer when there is a boom in business. Indeed, the Interstate Commerce Commission stated in one of its recent annual reports that the difficulty here referred to recurs during the fall and winter months with regard to the transportation of coal, and usually also in connection with the movement of grain when crops are good. To remedy this seasonal shortage roads in the grain and livestock producing areas must buy more cars than would be necessary under a more equitable system of distribution. A study of car locations shows that during times when there is a brisk demand for transportation it is common for cars destined for some eastern terminal to be unloaded, loaded again for some point in trunk-line territory, and again loaded to an eastern point only to repeat the shuttling process many times. James J. Hill in 1906 sent tracers East to locate equipment which belonged to his system and many of his cars were found shuttling back and forth between Maine and Boston hauling ice.

Can this condition of affairs improve so long as we expect carriers to release cars to other roads and thereby lose revenue? To do so is to violate

a fundamental principle of administration. Can we expect a carrier to serve other roads and the public at its own expense? When the carriers came before McChord in 1916 they confessed that they had never paid any attention to their car service rules when equipment was very scarce and that to obey the rules meant an inroad on their revenue. The record in the hearing which Commissioner McChord held at Louisville, Kentucky, in 1916, showed that the Car Service Commission of the American Railway Association found over forty-thousand violations of car service rules in the month of June, 1916, and that the evidence of disregard for the rules was so overwhelming that further inspection was abandoned.

Is it not probable that more and more regulation of the inquisitorial sort will be necessary so long as a fundamental principle of administration is thus violated? Would it not be better to require such a reorganization of ownership in equipment that a carrier would not be forced to ignore the interests of the public while working in its own interest? This can be accomplished by eliminating railway company ownership and control of equipment. If there were organized equipment companies in whatever number the size and traffic characteristics of the country demand, these companies would have no interest whatever in serving any one carrier or even any one district more than another. Such a plan would eliminate the conflicting functions which exist under the present plan.

IV

In regard to the regulation of railway service in terminals a similar condition exists. A carrier with a strategic terminal cannot be expected to serve

the interests of the public at its own expense. In the public interest all terminal facilities, should be operated as a unit and thus the maximum of efficiency realized. But it may be to the interest of any one railroad to allow freight to pile up at its terminal until it can be moved rather than allow another road to come in and handle it. Terminal congestion, therefore, may mean increased dividends to a particular carrier. On the other hand to throw open the terminal facilities of a strategically situated railway to competitors would make serious reductions in the revenue of the railroad owning the terminal. Are we not expecting too much when we demand that carriers with advantageously located terminals shall throw them open to competitors? An examination of terminal tariffs will convince any one that carriers intend to restrict the use of their facilities to themselves as far as possible. We are likely to need more regulation of the inquisitorial type so long as we expect carriers to exercise conflicting functions. Would it not be better to require that all facilities in our important terminals be owned by separate terminal cor-

porations? Those terminal corporations would have no interest in serving one carrier to the disadvantage of another and the public would therefore have the benefit of a completely coordinated terminal used to its maximum capacity. Under such an arrangement the congestion, which often occurs in one part of a terminal while other parts are being used much under their capacity, would be eliminated.

In conclusion, the fact is emphasized that the proposals here made in no way mean government ownership. Indeed, it could be contended with much reason that such a plan is the only escape from government ownership. The separate equipment companies which would own the railway equipment and the separate terminal companies which would own the terminal facilities would be as truly private organizations as are the railway companies themselves. Such a plan would remove the violation of a fundamental principle of administration which is that business organizations exist to make profits. Such a plan would make possible the maximum of service to the public and the maximum dividends to the corporations.

THE MAIL-ORDER DEPARTMENT—A FLEXIBLE SALES OUTLET

BY DANIEL H. STEELE*

INTENSIFIED selling requires many kinds of salesmen as the sales manager directing a large force is the first to recognize. He would not, for instance, ask his "top-of-the-line" salesman to do missionary work in Broken Bow, Montana; yet he would appreciate the value and necessity of such pioneering. Probably he would also concede that there are certain prospects his sales force could never profitably visit, because of geographical or physical limitations. The prospects off the salesman's beaten path, however, might be the seedlings of future business.

Ten years ago a man from a small prairie town in Nebraska walked into a large wholesale dry-goods house in Chicago and announced that he was going to start a store in his home town. His entire capital consisted of \$900 and his opening bill was naturally very small. The salesman who, in those days, would have considered a visit to a small prairie community worth the inconvenience of a night in its dinky hotel would have been combing his territory very thoroughly, indeed. Still, this business once started was well worth following out, for that tiny store today is the parent of a chain of seven.

It is axiomatic that businesses which continue to grow must have a constant infusion of new blood in their distributing systems, so that they do not become anaemic and sluggish. Without it they lack the reserve vitality for quickly increasing sales when competition quickens. Today, with the buyers'

market gone, the selling organization which contented itself with serving house accounts alone is seriously handicapped. Contact is likely to be lost between the house and the potential market it should have been developing.

A department for selling direct to the retailer by mail can serve as an accessory to the sales force in cultivating the seedling accounts until the business can be handled advantageously by salesmen.

Forty years ago a new type of wholesaler began to solicit retail business exclusively by mail. The idea took hold and some of these houses have grown to enormous size. Regular wholesalers watched their growth with interest not unmingled with apprehension. They considered the methods of the newcomers to some extent undignified and adapted to a different sort of business. They asked themselves whether this competition was to become permanent or was just a temporary phase of merchandising; whether its service was sound economically or must give way in the contest with their own highly trained selling organizations. Some of them attempted to analyze the possibilities of mail-order methods applied to their own selling problems, and seizing the central idea of catalogue selling, began in a groping fashion to issue catalogues of their own. Here and there these catalogues developed into real, virile selling organs, but for the most part they never arose above the "price-list" class. Perhaps during prosperous years the regular wholesaler had little incentive to ex-

* With Wilson Bros., Chicago, Ill.

periment with what he considered a merchandising innovation.

But a critical period like that from which we are emerging demands unusual measures and precedents, requiring fair-weather tactics to give place very often to new things. The necessity of re-selling large stocks of canceled and returned goods late in the season, and of keeping the trade posted on the fluctuations of rapidly changing prices required that hundreds of customers be reached almost at once. Obviously, no sales force could cover the ground in time. Wholesalers developed mail-order departments almost without realizing that they were doing so. They were absolutely in tune with the sentiment of the retail buyer who was learning the importance of liquidating his stock and buying from hand to mouth. Such mail-order departments helped solve the wholesaler's own problem of liquidation.

II

In analyzing the possibilities of a mail-order department in a wholesale mercantile house, it is essential that the background of its entire selling plan be studied. It is necessary to measure to what extent existing arrangements are caring for the trade the mail-order department proposes to serve. If the sales force has grown almost undirected until the territories covered are more the product of a gradual evolution than of logical assignment, the house can co-operate with the salesmen in covering the territories more uniformly. The salesmen value such consideration because of the prospects it builds up into worth-while accounts for them to call upon.

It is not enough simply to take a list of stores the salesmen cannot reach. The scope of the mail-order department is much broader. In the nature

of things a salesman can seldom visit any of his accounts oftener than from four to six times a year, and he sees many of his smaller ones only once or twice. How can he keep them in line during his long absences? That depends upon the extent to which his firm has developed its mail service department. Retail buyers are becoming accustomed to ordering their fill-in and repeat goods by mail, and the sales records of any wholesale house will show a varying, but none the less important, volume of orders that come in daily direct by mail. The mail-order department has an opportunity vastly to increase these sales. Merchants on whom for personal reasons the salesmen are not calling can very often be won back by the hammering away of the mail campaigns. A mail selling department, supplementary, of course, to the present selling plan, can be so organized as to serve all the customers it is thought desirable to reach, regardless of whether or not they are visited by salesmen. It need not in any way conflict with the sales force, but should act as a source of support for it.

After the functions of the mail-order department have been determined, the lists of customers, properly checked and classified, are the foundation upon which it must build. They are the raw material with which it must work, and the efficiency and economy of its operation depend very largely upon the accuracy and completeness of those lists. The editor of a big machinery catalogue who was undertaking to reorganize the mail-order department of his firm recently told the writer that his biggest task had been to cut their mailing list, or rather morgue of dead names, from 35,000 to 18,000. It is not hard to burden a mail campaign with so much waste circulation that the possible profits are squandered. The limitations of space prevent the

discussion of the mailing list here. It can simply be said that the more scientific and detailed the analysis of the selling field, and the more rigid the supervision over the mailing lists, the more productive the work of the department is likely to be.

III

The diversity of conditions in wholesale businesses makes a discussion of specific rules for the organization of a department for mail selling out of the question. Facts which would influence such organization are sure to vary in every case, and methods unusually successful with one house might be impossible with another.

Primarily, a mail-order department must be equipped for the aggressive solicitation of new business, for prompt, efficient service in handling inquiries and turning them into orders, for co-operation with the merchandise departments in supplying the character of goods most suitable to this particular trade, and for co-operation with the salesmen, working with them and in advance of them to keep the house constantly in the minds of its customers. It must develop a personality, impress that personality upon its trade, and train customers to depend upon and have confidence in its service.

The merchandising methods of the mail-order department must be adapted to conditions as it finds them rather than seek to develop new methods possibly more effective than those already in use. Where it is not practical to maintain separate stocks for mail-order requirements, the mail-order department must work with the merchandise departments in pushing the goods these departments are most anxious to dispose of. It is necessary, of course, that the mail-order department be not considered as simply a

dumping ground for leftovers from the regular stock and as an outlet for old stuff that the salesmen have been unable to move. Such a policy would present the house in a most unfavorable light and the possible benefit of ridding stocks of these old goods would soon be counterbalanced by a loss of prestige.

The merchandising departments must be fully persuaded of the possibilities of the mail selling department so that they are willing to go a little more than half way, to begin with, in helping its development. The buyer of each department, in planning his next season's line, can do a great deal to make it a success with the mail trade. His own judgment and the sales records of the past year will indicate pretty clearly the best numbers for mail-order purposes. They should be of very general appeal and so priced as to meet competition. But of first importance is the necessity of assuring adequate stocks for immediate shipments throughout the season. The most serious setbacks these departments have had were due to their inability during war times to supply promptly the goods ordered. Experience shows that a customer may find an article out of stock once and write again for it without being seriously annoyed, but if he gets that sort of service twice he will seldom try again. And a customer gained and *then* lost is exceedingly difficult to regain.

Very often, where stocks are sufficient to serve all requirements broken and closing lines which are not otherwise offered for sale may be entrusted to the mail-order department. Furthermore, the numbers for the mail-order stock need not be confined to the regular line. They can frequently be strengthened by the addition of a timely purchase or some specialty particularly suited to catalogue selling.

The buyer will recognize the opportunity to do this.

When the new line is finally determined and the requisition for space is sent to the catalogue department it is the duty of the buyer of each department to prepare for the catalogue detailed lists of the numbers he wishes to include therein, with complete descriptions and prices, and such special comment as is necessary to explain the relative importance of leading numbers and styles.

The catalogue department studies the merchandise sheet with reference to the space occupied in the previous year's book; the position it occupied, the space given to merchandise editorials and sales headings, the number, character, and size of illustrations, their effectiveness, the amount of color used, and a whole range of technical and mechanical considerations. It surveys the mechanical requirements of the catalogue as presented by the merchandise sheets of all the departments and prepares a chart or preliminary layout of the entire book, supplying the advertising, editorial and educational features it plans to include.

In conference, usually with the general manager and the mail-order department, the size of the catalogue is fixed and a budget is compiled of the estimated catalogue expense. The catalogue department then gives the departments their final allotment of space and position in the book, bearing in mind, among other things, the attractiveness and desired effect of the book as a whole, the relative mail-order importance of the different departments, whether it is their turn to occupy positions of prominence, the logical arrangement, printing and mechanical arrangements, and the news interest and display value of the merchandise in the various departments. The catalogue department must also

make a minute study of past books and recent developments in cataloguing to discover opportunities for cutting costs and increasing productivity.

IV

Although the catalogue is the most important selling representative of the department, it must be considered in conjunction with the advertising and other development work of the mail-order campaign. The campaign must be planned for a certain period in advance so that it does not deteriorate into a series of intermittent mailings. It should be thought through as an entire campaign—a complete selling offensive, thorough and aggressive. It should be a unit, in which follow-up, trade-paper advertising, and direct mail matter all dovetail.

If the book is issued semi-yearly, or even quarterly, it is advisable that regular mailings of other selling material be made to keep the trade in constant touch with the house and informed of its service. For this purpose some houses make use of a house organ or trade bulletin of market news and educational matter. Then the various seasonable lines of goods will require representation at fixed times during the year. For greater effectiveness the presentation of all these features must be co-ordinated with the mailing of the catalogue, the trade letters, trade-paper advertising and other selling efforts.

The mail-order department proper exists to give service to the customers who call upon it. The catalogue and advertising departments reach out for new accounts and keep the old accounts active but their responsibility ends with that. The mail-order department must reduce the handling of inquiries to a standard routine so that the proper records are made and the

necessary action promptly taken. If the request is for literature or further information it must be intelligently answered. If prices are asked for or samples or swatches ordered the selection made should correspond to the request—very frequently an indefinite one—of the customer. Provision must also be made to follow up the matter if the customer does not reply or place his order.

After the necessary records have been made in the mail-order department regular mail orders can go straight to the merchandise departments for routine handling. If the order is not entirely clear, or if to fill it requires the substitution of articles differing from those ordered or if any correspondence is necessary before the order can be satisfactorily filled, the merchandise department is at liberty to write the customer direct for information without referring the matter to the mail-order department. It is important that the total number of orders resulting from each piece of mail matter and the quantity ordered of each item be listed, with an identification number so that the productivity of each mailing effort can be minutely studied. The work of the mail-order department must be unusually intensive in all of its branches. It must not tolerate carelessness in the handling of a single inquiry or order however small or unimportant it may appear. Its service personality is built up by the conspicuous attention it gives to the smallest details. Its growth should repay all its costs to give uniform generous service.

The president of a large wholesale house was addressing his department

heads at a January conference. They were studying the lessons taught by 1920 and making plans for the coming year. They were trying to discover how they might overcome the resistance of the peculiar market characterized by the "buyers' strike" and maintain their boom-time rate of growth.

"Gentlemen," said the speaker, "Can you imagine Johnson even approaching his last year's sales record in Alabama this spring with cotton selling at 9 cents? Do you believe that Turner's Iowa business can amount to more than half, with corn selling down to 40 cents a bushel? Frankly, I do not. I am afraid our sales force can do little more than hold their own. There is one place, however, where I believe we can look for a substantial increase if we are all willing to work for it, and that is a place whose importance has been persistently minimized—the mail-order department. I am convinced that there are tremendous possibilities for growth along those lines, and this year particularly, with buyers staying at home and buying by mail from hand to mouth. We have been scarcely scratching the surface of this field. Let us put an Oliver plow on it instead of a pointed stick."

The flexibility of mail selling, the ease with which it can be controlled and regulated, and the comparative cheapness of selling expense; the sales promotion work it is capable of and the useful outlet it provides for absorbing overstocks and surplus production, suggest that there are few wholesale mercantile houses that might not with profit apply many of the principles of mail-order merchandising.

WHEN PROFITS FALL OFF

BY H. D. GRANT*

THE executive needs more information from his chief accountant than separate reports of cost and income, to which a footnote is appended, "that the year under review shows a loss against the preceding year." Unless statements are so consolidated that current figures can be readily compared with past or average figures, it is impossible mentally to analyze them.

When profits in a given year show an increase over those of succeeding years, the business man has no cause for worry; when profits are fairly constant year by year, at least the business is holding its own, assuming, of course, a fair return on the capital investment. On the other hand, when the profits of a year following a fairly or averagely prosperous year (which we will term the "focal" year), show a decrease, executives need the enlightenment of a detailed analysis of the factors responsible for the reduction in profits.

Such an analysis can be made by comparing the income and the cost of this income for each decreasing period with that of the focal year. Such a comparison is shown in the following analyses of the cost of goods sold and the expenses for three years, the first year being the focal year. The exhibits show not only the increase or decrease in each item involved, as the case may be, but also that the net difference is in agreement with the difference between the profit of the focal year, and the profit and loss of the second and third years, respectively. When such an analysis is made, various items should be so grouped that their study will en-

able the executive to form a plan for either curtailing direct costs and expenses or increasing prices or expanding sales. When the average of any number of lean years for every item involved is compared with the same items of the focal year, either an increase or a decrease is shown, as the case may be. This analysis determines the cause of the variation in profit or loss.

An increase or decrease in profit may result from an over- or an under-valuation of inventory resulting in over- or under-stated costs; or reserves may not have been charged and credited consistently one year against another; or overhead expenses may not be properly spread over the yearly periods to which they belong, one year showing an overcharge and another an undercharge. This is the reason why the figures for several years should be compared with those of the focal year.

In the exhibits here shown, the executive is furnished with information not only covering in detail the cause of the decrease in profits, but presented in such a way that if called upon by his superiors he can intelligently explain from the detailed figures the cause of a loss or a decrease in profits.

In many businesses at the present time it is the function of the statistical department to make the type of analysis here used. In others, the responsibility for this work is placed on the accounting department. From the standpoint of functional organization, there may be some question as to the proper place and the responsibility for doing the work, but there is a growing recognition of the value of such analyses. More and more, business is being

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ANALYSIS OF COST OF GOODS SOLD—3 YEARS 1917, 1918, 1919
SCHEDULE 1—COST OF GOODS SOLD

	COMPARATIVE YEARS			INCREASES AND DECREASES*			TEST-PROOF ADJUSTMENT	
	1917	1918	1919	1918	1919	2-Year Effect	Yearly Average	Cost of Goods
COST OF GOODS MANUFACTURED:								
Work in Process at beginning of year.....	\$22,761.40	\$24,641.53	\$19,524.37	\$1,880.13	\$5,237.03	\$1,566.90	\$678.46	\$22,082.95
MATERIAL COSTS:								
Inventory at beginning of year.....	\$12,417.63	\$15,461.93	\$13,987.52	\$3,044.30	\$1,569.89	\$4,614.19	\$2,307.10	\$14,724.73
Net Purchases.....	89,528.57	53,407.05	83,602.76	36,067.62	6,226.81	41,987.39	20,993.67	68,534.90
Freight and Cartage Inward.....	1,066.59	1,256.73	1,095.27	190.14	28.68	218.82	109.41	1,176.00
Total.....	\$103,012.79	\$70,185.71	\$98,685.55	\$32,227.08	\$4,227.24	\$37,154.32	\$18,277.16	\$84,435.63
Deduct: Inventory at end of year.....	15,461.93	13,987.52	11,368.74	1,474.41	4,093.19	6,667.00	\$7,787.80	12,675.13
Net Material Cost.....	\$87,550.86	\$56,198.19	\$87,316.81	\$31,562.67	\$234.06	\$31,566.72	\$16,793.36	\$71,757.50
DIRECT LABOR:								
Inventory at beginning of year.....	\$161,478.92	\$119,254.37	\$157,765.38	\$42,224.66	\$3,715.64	\$46,938.09	\$22,369.06	\$138,509.87
MANUFACTURING OVERHEAD:								
Indirect Labor.....	\$16,413.89	\$10,672.09	\$15,027.96	\$5,747.96	\$1,855.98	\$7,187.73	\$3,663.86	\$12,830.03
Power.....	23,175.07	14,407.15	19,572.34	\$5,768.23	\$3,093.09	\$6,717.57	\$3,155.69	\$17,039.74
Factory Supplies and Expense.....	12,465.07	8,202.63	10,806.75	\$4,172.44	\$1,658.32	\$5,870.76	\$2,915.38	\$9,549.69
Factory Repairs.....	18,872.96	7,457.09	11,002.49	\$3,416.87	\$1,299.65	\$3,286.22	\$1,643.11	\$9,229.85
Taxes.....	3,507.89	3,507.89	3,807.49	299.60	299.60	299.60	149.80	\$3,657.69
Depreciation.....	12,001.43	12,001.43	12,001.43	.....	.....	.....	.....	12,001.43
Insurance.....	4,204.86	4,009.53	3,170.58	\$196.53	\$1,034.23	\$1,229.61	\$114.31	\$3,590.05
Total.....	\$79,641.53	\$60,347.81	\$75,489.16	\$19,293.72	\$4,152.37	\$23,446.09	\$11,723.08	\$67,918.48
TOTAL.....	\$351,432.71	\$260,441.90	\$340,085.72	\$89,690.81	\$11,936.99	\$102,327.80	\$61,163.90	\$300,268.81
Deduct: Work in Process at end of year.....	24,641.53	19,524.37	20,657.91	\$5,117.16	\$3,983.62	\$9,100.78	\$4,650.39	20,091.14
Cost of Goods MANUFACTURED.....	\$326,791.18	\$240,917.53	\$319,427.81	\$55,373.66	\$7,553.37	\$93,227.02	\$46,613.61	\$280,177.67
Adj.: Finished Goods Inventory.....	42,445.22	10,779.75	6,462.19	\$53,224.97	\$35,993.03	\$89,218.00	44,609.00	2,163.78
Cost of Goods Sold.....	\$284,345.96	\$231,697.28	\$312,985.62	\$32,648.68	\$28,639.66	\$4,009.02	\$2,004.61	\$282,341.45

COMPARATIVE STATEMENT OF PROFIT AND LOSS

	FOCAL YEAR		COMPARATIVE YEARS			INCREASES AND DECREASES*			TEST-PROOF ADJUSTMENT		PERCENTAGE OF	
	1917		1918	1919		1918	1919	2-Year Effect	Yearly Average	Profit and Loss	Sales	Difference
Net Sales.....	\$377,615.13		\$324,264.15	\$388,159.69	\$63,360.98	\$10,544.56	\$42,906.42	\$21,403.21	\$356,211.92		94.33	6.67
Cost of Sales.....	284,345.96		251,697.28	312,985.62	32,648.68	28,639.66	4,009.02	2,004.61	282,341.45		74.77	0.63
Gross Profit on Sales.....	\$93,269.17		\$72,566.87	\$75,174.07	\$18,096.10	\$18,096.10	\$38,797.40	\$19,390.70	\$73,370.47		19.56	6.14
Selling Expenses.....	15.36		57,981.75	63,429.52	6,710.49	5,447.77	1,262.72	631.96	57,350.39		15.19	0.17
Net Profit on Sales.....	\$35,287.42		\$21,935.61	\$11,744.55	\$23,691.81	\$23,691.81	\$37,624.68	\$18,767.34	\$16,520.08		4.37	4.97
Administrative Expenses.....	5.19		19,621.78	16,710.98	\$2,910.80	\$14.10	\$3,624.90	\$1,812.45	\$17,809.33		4.71	0.48
Net Profit or Loss.....	4.15		\$4,584.63	\$7,163.13	\$11,081.01	\$22,328.77	\$33,009.78	\$16,964.89	\$1,889.26		0.34	4.49

* Decreases are in italics.

ANALYSIS OF EXPENSES—FOR THE YEARS 1917, 1918, 1919
SCHEDULE 2—SELLING EXPENSE

	COMPARATIVE YEARS		INCREASES AND DECREASES*		TEST-PROOF Yearly Average	ADJUSTMENT Expense
	1917	1918	1919	1918	1919	
Salemen's Salaries	\$14,500.00	\$16,750.00	\$18,000.00	\$2,250.00	\$3,500.00	\$17,375.00
Salemen's Commissions	2,215.69	1,847.30	2,567.02	368.80	351.33	2,207.16
Salemen's Expense	12,489.63	13,782.14	16,721.94	1,292.51	4,231.91	15,251.84
Advertising	19,734.19	10,276.09	14,776.18	9,468.10	4,968.01	12,526.14
Entertainment	542.61	614.85	591.50	72.24	48.89	603.17
Misc. Selling Expense	217.59	151.94	175.48	66.66	42.11	163.71
Freight and Cartage Outward	1,987.29	1,876.45	2,921.68	110.84	934.39	2,399.06
Shipping Dept. Salaries	2,475.00	2,600.00	2,750.00	125.00	400.00	2,675.00
Shipping Dept. Supplies and Expense	3,819.75	3,372.49	4,926.12	447.26	1,106.37	4,149.31
Total	\$57,981.75	\$51,271.26	\$63,429.52	\$6,710.49	\$5,447.77	\$57,350.39

SCHEDULE 3—ADMINISTRATIVE EXPENSE

	COMPARATIVE YEARS		INCREASES AND DECREASES*		TEST-PROOF Yearly Average	ADJUSTMENT Expense
	1917	1918	1919	1918	1919	
Officers' Salaries	\$7,000.00	\$7,000.00	\$7,000.00	\$64.03	\$159.70	\$4,598.59
Office Salaries	4,550.75	4,486.72	4,710.45	28.69	8.26	154.64
Stationery and Printing	141.93	170.62	138.67	19.72	6.10	189.28
Office Supplies and Expense	201.67	181.95	196.57	14.91	22.00	485.47
Telephone and Telegraph	481.92	467.01	503.92	17.45	60.08	880.34
Postage	841.57	859.02	901.65	1,000.00	2,000.00	250.00
Legal Expense	1,250.00	250.00	250.00	2,236.44	179.68	3,167.10
Misc. Expense	4,194.98	1,959.54	4,374.66	201.99	507.24	463.80
Taxes	516.42	718.41	209.18	48.10	70.01	1,435.91
Insurance	1,425.00	1,376.81	1,495.01	223.36	110.00	816.78
Net Inv. and Cash Discts.	382.46	759.10	872.46			
Total	\$19,621.78	\$16,710.98	\$18,907.65	\$5,910.80	\$614.13	\$10,809.33

* Decreases are in italics.

conducted and business policies are being formulated on just such detailed analyses as those shown here. Not only are they of value in times of decreasing profits when results are not satisfactory, but in normal times executives are finding them well-nigh indispensable.

For the hypothetical case illustrated, there was in the year 1917, a net profit of \$15,665.64 with a general falling off in profits for the two succeeding years of 1918 and 1919 as shown in the first table.

The purpose of the analysis is to demonstrate the cause of the falling off in detail of the items involved in a concrete comparative profit and loss statement. The result of the analysis shows that every department connected with the business has decreased in percentage for an average year as in Table II.

The average yearly decrease of $\$16,954.89 \div 4.49\% = \$377,615.13$, the sales for the focal year of 1917 against which the lean years are compared.

The cause is comprehensively shown for each item of sales and the whole cost to produce them, and by referring to the analysis of each department you will see that the effect is expressed for each year of 1918 and 1919 against that of 1917. The total of these years is then divided by 2 to show the average year. The net decrease of 1918 and 1919 of \$16,954.89 as averaged is proved in Table III.

The amount of $\$33,909.78 \div 2 = \$16,954.89$, the average yearly difference between the years 1918 and 1919, and that of 1917. The sales of the year 1917, amounting to \$377,615.13, being the value by which all percentages are determined, all the departmental cost figures for both 1917 and those of the adjusted average year would be divided by this amount to arrive at any desired percentage.

The percentage could be assigned to each detail of the various schedules if so desired, and the net result would be the same as that shown in each differ-

TABLE I

Profits earned 1917 (focal year).....	\$15,665.64	
“ “ 1918.....	4,584.63	
Difference in profits 1918.....		\$11,081.01
Profits earned 1917.....	\$15,665.64	
Loss sustained 1919.....	7,163.13	
Difference in profits 1919.....		22,828.77
Difference in profits for two years (decrease).....		\$33,909.78
“ “ “ average one year (decrease).....		<u>\$16,954.89</u>

TABLE II

The sales show a decrease of.....	5.67%
Cost of goods sold show a decrease of.....	0.53%
Selling expense “ “ “ “.....	0.17%
Admin. “ “ “ “.....	0.48%
Whole cost.....	1.18%
Net average decrease for one year is.....	4.49%
of sales for 1917.	

TABLE III

Decrease in sales 1918.....		\$53,350.98
Increase in sales 1919.....		10,544.56
Net decrease in sales.....		<u>\$42,806.42</u>
Decrease in cost 1918.....	\$32,648.68	
Increase in cost 1919.....	28,639.66	
Net decrease in cost of goods sold.....		<u>\$4,009.02</u>
Decrease in selling expense 1918.....	\$6,710.49	
Increase in " " 1919.....	5,447.77	
Net decrease in selling expense.....		<u>1,262.72</u>
Decrease in admin. expense 1918.....	\$2,910.80	
" " " " 1919.....	714.10	
Net decrease in admin. expense.....		<u>3,624.90</u>
Net decrease in whole cost.....		<u>\$8,896.64</u>
Difference render profits of 1917.....		<u><u>\$33,909.78</u></u>

ence of 5.67%, 0.53%, 0.17%, 0.48%, and 4.49%. This would not be practicable, however, as the increases and decreases of each detail item are shown on each schedule, and to further expand them by percentages would not be required as they would be of no interest to the owner.

The reason for the net decrease as shown by the percentages is interpreted in the manner shown in the paragraphs which follow:

The sales show an average annual decrease of 5.67%, and the cost and expense an average annual decrease of 1.18% which is negative to the percentage of sales. This leaves a net average decrease of revenue equal to 4.49% of the net sales of 1917, which is the focal amount on which all percentages are based.

The like effects between the percentage of sales and costs are deducted to get the net difference, and the unlike are added; or to make it clearer, if they both show an increase or decrease one is deducted from the other, but if one shows an increase and the other a decrease they are added, and the result will show either a net increase or decrease for the period.

If the increase or decrease in both sales and costs are equal, there would be no difference in profits or losses. The percentage divided into the profit or loss shows the sales, and by reducing the different increases and decreases to a net average annual percentage of profit or loss on the sales of the year, with which comparison is made, you locate the cause of the difference in the annual earnings.

CONSIDERATIONS OF CONSOLIDATED ACCOUNTS

BY EARL A. SALIERS*

MANY large enterprises are combinations and consolidations of concerns formerly independent. This merging of companies engaged in like or related industries has resulted from the desire of their officials and stockholders to avoid certain evil effects of competition and to secure certain positive advantages, such as:

1. Integration in production.
2. Price control.
3. Control of transportation.
4. Concentration of certain lines of work in certain plants.
5. Control of the sources of raw materials.
6. Control of labor in large groups.
7. Dispensing with surplus salesmen.
8. Elimination of duplicate officials.
9. Operation with a minimum stock of merchandise.
10. Reduction of office expenses.

Integration in production means the expanding of the activities of an enterprise in order to include more of the processes of production; consequently it comprehends items 3 and 5 in the above list. It is to enable them to secure integration that steel companies have organized or bought up subordinate mining and transportation companies whose function it is to extract ores and carry them to the manufacturing plants. Large retail stores have obtained control of factories and thus are enabled to get their output on more favorable terms than would otherwise be possible.

There are also many instances of the combination of enterprises which are engaged in similar and naturally com-

petitive undertakings. Such combinations are established chiefly, not to secure greater integration in production, but to avoid the effects of competition, as well as to secure such gains as may be made by combining the purchasing, producing, and marketing organizations.

Following the depression of 1873, corporations became a very popular form of business organization in the United States. At that time none of the now well-known combinations existed, and, to eliminate competition, various kinds of arrangements were entered into. Of these arrangements the pool was the most common. Manufacturers entering into a pool agreed to sell their output through some central organization with the object in view of securing stabilization of output as well as of prices. The only power of enforcing pools lay in the good faith of the members, since their provisions were not enforceable at common law; and, since such good faith could be enforced only by means of fines and penalties, it often became profitable for members to break their agreements.

Next came the trust. Under a trust, the voting stocks of the affiliating companies were placed under control of a board of trustees which issued receipts known as trust certificates to the owners of the stock. In both authority and permanence this was a great advance over the pool. However, its effectiveness was impaired by adverse court decisions and legislation; the test of whether or not a combination was in restraint of trade became decisive, and as a result the trust was abandoned for the now popular holding company.

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The holding company was first made a practical possibility through the enactment by the legislature of the state of New Jersey of a revised general corporation act, under whose provisions one corporation was granted the right to purchase and hold the stocks of other corporations. Previously to the passage of this law the privilege had been enjoyed only by corporations which had received it by special legislative act. It has been said that "for momentous consequences, this statute of New Jersey is hardly equaled in the annals of legislation; corporate organization could henceforth be promoted, not to serve the ends of industrial management, but solely in order that financial combinations might indirectly control operating companies through ownership of their capital stock." Under this law consolidation has proceeded rapidly, so that today many lines of industry are thus controlled.

When securities are held for other purposes than control it is not ordinarily necessary or desirable to show the accounts in consolidated form, that is, to set up a consolidated income statement and a consolidated balance sheet. But when control of one or more corporations by another exists through intercompany holdings of capital stock, the two or more concerns thus linked together are really unified and it is desirable to contrive some means of expressing the full meaning of such unification; that is, of showing in a single balance sheet the assets, liabilities, and capital combined and all intercompany accounts eliminated.

To illustrate, if Company A owns 90 per cent of the common stock outstanding of Company B, it exercises full control of it and therefore determines its policies. Moreover, if, as is probable, it is in the same or a related industry, it buys from and sells to Company B and possibly advances cash to Com-

pany B on certain occasions. If Company A sells goods to Company B at an apparent profit of \$500 it is evident that, considering the two companies as a unit, no true profit is made. Inventory values are simply marked up by transferring merchandise between affiliated concerns. In order to present the true status of the two companies it is necessary to make an adjustment for such inflated inventory values. Moreover, all intercompany balances on current or open accounts are offsets to each other, when the two or more affiliated companies are viewed as a unit, for the same reason that an individual cannot be indebted to himself. Again, when the accounts of a holding company are not consolidated with the accounts of its subsidiaries it is possible for the holding company to take into its income account dividends from those subsidiary companies which make a profit and at the same time fail to show the losses of other subsidiaries.

The federal taxation of corporate incomes has made it increasingly important that the true status of affiliated business enterprises be accurately ascertained. Of, say, three corporations more or less closely related, the income subject to taxation is very likely to be affected by the question, whether or not the accounts should be shown in separate or in consolidated form. If, for example, there are profits on intercompany sales, these are considered as representing inflated inventory values when the accounts are consolidated, but, on the other hand, as being legitimate profits subject to taxation when the accounts are not consolidated. Consequently it is important that correct principles be applied in determining which corporations must be required to submit their returns in consolidated form.

Much has been done in both England and the United States to put the taxa-

tion of affiliated companies on an equitable basis. The English Finance Act of 1915 contained the following provision regarding the consolidation of accounts for purposes of income taxation:

When any company, either in its own name or that of a nominee, owns the whole of the ordinary capital of any other company carrying on the same trade or business or so much of that capital as under the general law a single shareholder can legally own, the provisions of part III of this act as to excess profits duty and the pre-war standard of profits shall apply as if that other company were a branch of the first named company, and the profits of the two companies shall not be separately assessed.

II

The United States Revenue Act of 1917 contained no provision concerning consolidated accounts. Before the regulations interpreting and explaining this act were issued by the Treasury Department, the American Institute of Accountants submitted a brief strongly urging the adoption of consolidated returns. It stated, in part, that there were two possible bases, namely, (a) that intercorporate relationships must be on a *strictly commercial basis*, which would be troublesome both to the taxpayer and the government, or (b) that *the combined operations must be treated as one whole*. "The latter course," ran the report, "would impose no additional burdens on anyone since it is the course followed for all practical purposes by the corporations themselves and recognized by bankers, economists and accountants as the only course which reveals the true situation."

Among other important statements, this brief pointed out that at that time (1918) some of the ablest minds of the country ought not to be diverted from work of a kind beneficial to the country, in order to be put to the task of evolving schemes of internal corporate

organization solely intended for the purpose of preventing an unjust tax; also that it would be wrong to give unscrupulous individuals an opportunity of evolving schemes for the evasion of just taxation. It stated, furthermore, that the hardships which would result in many instances from separate assessments would be so great that some corporations and their subsidiaries would find it necessary, in self-defense, to make such readjustments as would minimize the hardships resulting from such methods of taxation.

The regulations issued by the Treasury Department provided that:

whenever necessary to more equitably determine the invested capital or taxable income, the commissioner of internal revenue *may* require corporations classified as affiliated under article 77 to furnish a consolidated return of net income and invested capital.

A treasury decision was subsequently issued under which:

affiliated corporations, as limited and defined in paragraphs C and D of the regulations *are hereby directed* to make consolidated returns for the purpose of excess profits tax.

Concerning what companies were to submit consolidated statements the regulations provided:

Two or more corporations are not "affiliated" merely because all or substantially all of the stock therein is owned by the same corporation, individual or partnership; they must also be engaged in the same or a closely related business.

The Revenue Law of 1918 made specific provision for consolidated returns, stating that "corporations which are affiliated within the meaning of this section shall, under regulations to be prescribed by the commissioner . . . make a consolidated return of net income and invested capital." The act provided that two or more domestic corporations were to be deemed affiliated,

1. If one corporation owns directly or controls through closely affiliated interest or by a nominee or nominees substantially all the stock of the other or others, or,

2. If substantially all the stock of two or more corporations is owned or controlled by the same interests.¹

The 1918 act thus required consolidated returns where all or substantially all of the voting stock is held *without regard to the similarity or dissimilarity of the businesses*.

Under the Revenue Act of 1918 it was necessary to submit consolidated returns both for the purpose of ascertaining net income and of ascertaining invested capital, the latter being required in the determination of the excess profits tax. The Treasury Department ruled that, "Consolidated invested capital must be computed as of the beginning of the taxable year of the parent or principal reporting company and consolidated income must be computed on the basis of its taxable year."² This means that the consolidated balance sheet submitted to the Treasury Department for the purpose of determining invested capital was to be dated as of the beginning of the taxable year while the consolidated statement of income was for the taxable year.

From the foregoing we see that the employment of consolidated balance sheets and consolidated income statements is not only of great importance to affiliated corporations, by enabling them to show their correct economic and financial status, but that these statements are now required from affiliated corporations by the government in order to enable it to levy the income tax correctly. Concerns which are really unified because their policies are determined by a unified control should not be represented as if they were separate³ and unrelated units. Con-

solidated accounts show the true condition of two or more enterprises which, although legally separate and distinct, are unified through a common control.

As stated in preceding paragraphs, the purpose of consolidated accounts is to present the true financial status of two or more enterprises which have been brought under a unified control. This control arises, ordinarily, through the ownership by the parent company of all or at least a majority of the voting stock of the subsidiary or controlled company.

III

When control is not exercised the accounts should not be consolidated and only dividends on account of stock owned should be taken into the accounts. Possibly, too, where control is exercised but where there is only a bare majority ownership of the subsidiary's voting stock by the controlling company, the accounts should not be consolidated; but the proportion of the profits and losses of the subsidiary which accrue on the stock owned by the parent company should be taken into the accounts of the parent company. Such procedure falls short of the complete consolidation of the accounts, but it does avoid the improper procedure, so frequently resorted to by holding companies, of manipulating profits and losses in such a way that only the results secured by those controlled companies which operate at a profit are reflected in the accounts of the parent company, while the results of the operations of those which operate at a loss are not shown.

Whether anything short of the complete consolidation of accounts will be satisfactory must be determined by circumstances. Theoretically, majority ownership implies control; therefore in studying the theory of consolidated accounts we should proceed on

¹ See Article 633 of Regulations 45.

² See Article 638 of Regulations 45.

the assumption that such majority ownership of stock necessitates the consolidation of the accounts, bearing in mind that in individual instances conditions may be such that a majority ownership of stocks does not carry control with it, and that in other instances, although it does carry control with it, such control is not exercised.

The fundamental principle to be followed in setting up the consolidated balance sheet is: Eliminate all intercompany holdings of capital stock as well as all other intercompany balances of every kind.

Corollary to this general principle it is therefore necessary,

1. To show intercompany current accounts separately and, when differences exist between them, to reconcile these differences and allocate them to the proper accounts.

2. To eliminate all intercompany profits resulting from intercompany sales above cost, thus removing such profits from inventory valuations.

3. To eliminate the intercompany holdings of capital stock, and such part of surplus as is applicable to such intercompany holdings.

Such discrepancies between intercompany current accounts as are referred to in (1) above arise from intercompany transfer of wealth where such transfers have been taken up on the books of the company which surrenders the wealth, but which have not yet been taken up on the books of the receiving company, usually because it is in transit at the time the books are closed. Thus, if Company A ships to its subsidiary, Company B, goods, at cost, amounting to \$5,000, and charges them against Company B, but these goods are still in transit at the time the books of the two companies are closed, Company A's account with Company B then shows a charge of \$5,000 against Company B corresponding to which

there appears no corresponding credit to Company A on Company B's books. If, before Company A shipped the goods and charged them against Company B, the intercompany current accounts appeared as follows:

ACCOUNT OF COMPANY B ON BOOKS OF
COMPANY A: SUBSIDIARY B CURRENT
ACCOUNT

To Sundries \$27,000	
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ACCOUNT OF COMPANY A ON BOOKS OF
COMPANY B: PARENT A CURRENT
ACCOUNT

	By Sundries \$27,000
--	----------------------

then, after the goods are shipped and charged by Company A against Company B, but before they are taken up on Company B's books, the accounts appear as follows:

ACCOUNT OF COMPANY B ON BOOKS OF
COMPANY A: SUBSIDIARY B CURRENT
ACCOUNT

To Sundries \$27,000	
To Mdse.	5,000

ACCOUNT OF COMPANY A ON BOOKS OF
COMPANY B: PARENT A CURRENT
ACCOUNT

	By Sundries \$27,000
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This difference of \$5,000 is reconciled by crediting intercompany current account and charging inventories, thus:

Inventories \$5,000

To Intercompany Current Accounts \$5,000

When this adjustment has been made in the working sheet used to compile the consolidated balance sheet from

the balance sheets of the affiliated companies, the intercompany current accounts exactly offset each other and so are eliminated in the consolidated balance sheet. Below is the ruling of the Treasury Department on intercompany accounts of affiliated companies.

In preparing such a balance sheet all intercompany items, such as intercompany notes and accounts receivable and payable, should be eliminated from the assets and the liabilities, respectively, and proper adjustments should be made in respect of intercompany profits or losses reflected in inventories which at the beginning or end of the taxable year contain merchandise exchanged between the corporations included in the affiliated group at prices above or below cost to the producing or original owner corporation. Such consolidated balance sheet will then show (a) the capital stock of the parent or principal company in the hands of the public; (b) the consolidated surplus belonging to the stockholders of the parent or principal company; and (c) the capital stock, if any, of subsidiary companies not owned by the parent or principal company together with the surplus, if any, belonging to such minority interest.

IV

Intercompany profits arise from intercompany sales above cost. If affiliated companies buy and sell among themselves at prices other than cost, whatever profit occurs on these intercompany transactions is, in reality, represented by inflated or written-up inventory values. Thus if three companies, A, B, and C, are affiliated through common control and A buys an article from an independent concern for \$500, sells it to B for \$600, while B in turn sells it to C for \$700, it is evident that, considering the three companies as a unit or as if they were really but one company, they have, by these intercompany sales, written up their inventories \$200 and thus shown a paper profit of that amount, \$100 on A's books and \$100

on B's books. Since the purpose of the consolidated balance sheet is to show the financial status of the group of affiliated concerns *as a unit* it is necessary to make an adjustment for this written-up inventory valuation. This is accomplished by charging surplus or current profit and loss, or both, with the amount of this fictitious or paper profit and crediting the same amount to inventories.

In such cases, if the intercompany profit in the inventory is found to be larger at the end than at the beginning of the period, an entry is made charging current profit and loss with the excess, and surplus with the intercompany profits at the beginning of the period; and crediting inventories with the intercompany profits at the end of the year. On the other hand, if the intercompany profits in the inventory are less at the end than at the beginning of the year, surplus is charged for the amount at the end of the year, and inventories are credited for the amount at the beginning of the year and current profit and loss for the difference. Thus, if at the beginning of an accounting period the intercompany profit in inventories amounts to \$5,000 and at the end of the period to \$6,000, the adjusting entry necessary to reduce inventories to cost and to show the effect of such reduction on current profit and loss and on surplus is as follows:

Profit and loss (current)	\$1,000
Surplus	5,000
To Inventories	\$6,000

If, however, we reverse the figures so that inventories at the beginning of the year show intercompany profits of \$6,000, and inventories at the end of the year, \$5,000, then the entry is:

Surplus	\$6,000
To Inventories	\$5,000
Profit and loss (current)	1,000

The adjustments are made in this form on the basis of the assumption that the current period's profit and loss is kept separate from surplus accumulated during previous periods. Were this not done the adjustment would consist simply in charging surplus with the intercompany profits in the inventories at the close of the period and the effect on current profit and loss would not be shown. It must also be remembered that these adjustments are *balance sheet adjustments* made for the purpose of correcting the *sums* of the respective items shown in the balance sheets of the affiliated companies before they are shown as *one* consolidated balance sheet. Were no such adjustments required the consolidated balance sheet could be compiled by merely adding together the like items in the balance sheets of the affiliated companies. It is with a view to making all necessary adjustments before showing the items consolidated that these adjusting entries, shown here in journal form, are made. The student must keep in mind that all intercompany balances of every kind must be eliminated in the consolidated balance sheet.

We have shown how intercompany current account balances must be adjusted and the totals eliminated, because they represent offsetting debits and credits when properly adjusted, also how intercompany profits must be eliminated from the inventories. We shall now study the method of eliminating intercompany holdings of capital stock.

The elimination of intercompany holdings of capital stock is a very simple matter when the stock of the subsidiary company is held at par on the books of the controlling company. Usually, however, it is shown on the parent company's books at some other value than par, so that before the

elimination of the intercompany holdings can be made by proper offsetting entries it is necessary to make proper adjustments to bring the accounts into agreement.

In this connection it is important to keep in mind the date of acquisition of the stock of the subsidiary company by the holding company, because the best accounting procedure eliminates the surplus as at the date of acquisition, by offsetting it along with the stock at par against the book value of the stock in the books of the holding company. The rule to be followed in doing this is:

When the book value of the stock of a subsidiary company in the balance sheet of the controlling company is *in excess* of the par value of the stock plus the surplus of the subsidiary company *applicable to such stock* at date of its acquisition by the controlling company, the excess should be charged to good-will. Likewise, when the book value of the stock of a subsidiary company in the balance sheet of the controlling company is *less than* the par value of the stock plus the surplus of the subsidiary company *applicable to such stock* at date of acquisition by the controlling company, the difference should be credited to capital surplus. If, however, good-will of a greater amount exists in the accounts of either the holding company or the subsidiary company, or if good-will of a greater amount has arisen through the purchases of stock of other subsidiary companies, good-will should be credited with the difference.

Sometimes good-will is not shown separately but is included along with other items under some such general heading as "cost of properties," or "investment in properties." In such case the charges and credits which would otherwise be made to good-will should be made to this account.

To illustrate the elimination of inter-

company holdings of capital stock, assume that holding company A holds three-fourths of the outstanding stock of subsidiary company B, the total of which amounts to \$100,000 par value; also that at time of the purchase of this stock by A the surplus of B amounted to \$60,000. Since A purchased three-fourths of the outstanding stock of B, three-fourths of the surplus at the time of the acquisition of the stock, or \$45,000, is applicable to the stock held by A. Now, assuming further that A purchased the stock of B at 170 or a total cost of \$127,500, this is the figure at which the stock of B should be carried in A's books. It is in excess of the par of the stock plus the surplus of B applicable to such stock at the date of its acquisition by A, which was:

Par of stock bought by A.....	\$75,000
Surplus applicable to stock bought by A ($\frac{3}{4}$ of total surplus at time of acquisition by A).....	45,000
	<hr/>
	\$120,000

Therefore, the book value of the stock of B on A's books (\$127,500) is \$7,500 in excess of the par value of the stock plus the surplus of the subsidiary company applicable to such stock at date of its acquisition by controlling company A, and the excess should be charged to good-will. This is reasonable since, if Company A was willing to pay for the stock of B more than its par plus its share of the surplus the excess must have represented A's estimate of the value of the good-will attaching to the stock. In form of a journal entry the adjustment would therefore be:

Capital Stock (of B owned by A).....	\$75,000
Surplus.....	45,000
Good-will.....	7,500
To Investment in stock of B	\$127,500

This eliminates the intercompany holding of capital stock, as well as the

surplus of the subsidiary company applicable to such stock at date of acquisition, and charges good-will for the excess of the cost of such stock over and above its par value plus the surplus applicable to it at the date of acquisition.

Why should the surplus of the subsidiary applicable to the stock held by the controlling company as at date of its acquisition by the holding company be eliminated? Why should it not form a part of the surplus of the consolidated company? Because the surplus of the subsidiary company is of the same nature as its capital stock. Indeed, there is no difference, from an economic point of view, whether we buy the capital stock, \$75,000, and surplus \$45,000 of a company of given net worth, or make a purchase of \$120,000 of the capital stock of a company having the same net worth but no surplus. In the one case the value is represented partly by stock and partly by surplus, in the other case, entirely by stock. It appears, therefore, that the surplus applicable at date of acquisition to the stock purchased should receive the same treatment as the stock.³

Surplus represents accumulated profits and a concern cannot accumulate such a surplus before it comes into existence; for this reason surplus accumulated by the subsidiary company before the holding company acquires control, although it remains the surplus of the subsidiary company, does not become the surplus of the controlling company, nor is it a part of the consolidated surplus. The surplus account of a holding company should reflect only such profits as the company makes from its own operations from the

³ For this reason if any dividends are received by the parent company out of such surplus of the subsidiary accumulated before the parent company purchased its holdings of the subsidiary's stock, they should be credited to the cost of the investment in the subsidiary company's stock, not to income.

date of its inception together with such profits as accrue to it from its holdings of stocks of subsidiary companies from the time of their acquisition.

V

When the holding company holds all of the outstanding stock of the subsidiary the adjustments explained above result in the elimination of all the surplus of the subsidiary company as it stood at date of acquisition. When the holding company acquires only part of the stock of the subsidiary only such portion of the surplus is eliminated in the consolidated balance sheet as is applicable to the stock acquired. The remainder of the surplus enters into the consolidated balance sheet as surplus of subsidiaries applicable to stock outstanding in the hands of the public. Also the stock outstanding is shown in the consolidated balance sheet as stock outstanding in the hands of the public. The two items, capital stock of subsidiaries outstanding and the surplus applicable thereto, may be shown as one item, as outstanding capital stock of subsidiary companies, or by some similar title. Any subsequent profits earned must be likewise allocated to the two divisions of subsidiary company stocks, namely, (a) that outstanding in the hands of the public and (b) that owned by the parent company. Consequently in future consolidated balance sheets these items should be kept carefully separated, and each carried to its proper division of the surplus account.

If the stock of the subsidiary company appears on the balance sheet of the holding company at a figure smaller than its par value plus its proportion of the surplus of the subsidiary company, the intercompany holdings are eliminated by crediting the difference either to good-will or to capital surplus ac-

count if there is not sufficient good-will to cover it.

Assume that Company C has bought three-fourths of the outstanding stock of subsidiary company D, the total of which amounts to \$100,000 par value. The purchase price was par, or \$75,000, at which amount it is carried on C's balance sheet. The surplus of D at date of acquisition was \$20,000. The adjustment necessary to eliminate this intercompany holding of capital stock from the balance sheets in preparing a consolidated balance sheet is:

Capital Stock (of D owned by C).....	\$75,000
Surplus.....	15,000
To Good-will.....	\$15,000
Investment in stock of D..	75,000

when there is sufficient good-will in the balance sheets of the affiliated companies to offset the surplus eliminated. If there is not any good-will the entry is:

Capital Stock (of D owned by C).....	\$75,000
Surplus.....	15,000
To Capital Surplus.....	\$15,000
Investment in stock of D..	75,000

The first of the above entries eliminated the intercompany capital stock holding of \$75,000, also the surplus of the subsidiary applicable thereto and the good-will on the books of the holding company which resulted from such surplus. The second entry is necessary when such good-will has never been brought into the books, but which evidently exists since there was a surplus of \$20,000 at the time the stock was brought into the books at par—a somewhat anomalous circumstance. It accomplishes the same result as would be secured if, first, good-will were brought in through the following entry,

Good-will.....	\$15,000
To Capital Surplus.....	\$15,000

and then the first entry shown above were made. It amounts to the capitalization of \$15,000 of the surplus of the subsidiary company *now*, whereas it might have been capitalized at the time of the purchase of the stock had its full value been paid then; in which case good-will would have been charged for the excess of the cost of the stock above par, which would have been \$15,000. Since value to the extent of \$15,000 has not been brought into the balance sheet of the holding company, in eliminating the \$15,000 surplus of the subsidiary company applicable to stock held by the parent company no corresponding elimination should be made from the assets side of the balance sheets, but the capital surplus account of the consolidated balance sheet should be credited with the amount eliminated from the surplus account of the subsidiary, which amount is applicable to the capital stock of the subsidiary held by the controlling company.

The income statement of the parent company, taken alone, reflects only such income of the subsidiary companies as is represented by dividends paid to the controlling company. This, obviously, is an unsatisfactory standard by which to judge the profit-producing ability of a group of affiliated companies, since dividends are usually paid in any period from profits earned during preceding periods and since the dividend-paying policies of corporations vary greatly and are not necessarily determined by their profit-making ability. The earnings of the affiliated companies can be properly shown only by combining the profits and losses of all of the affiliated companies. All profits and losses resulting from intercompany transactions must, of course, be eliminated in preparing the consolidated income statement. Likewise all transfers of profits from subsidiary to controlling company in the form of dividends must be eliminated.

TAKING ILLUSIONS OUT OF THE BUDGET

BY CHARLES H. INGERSOLL *

RUNNING a business is no easy job, especially if it is a real business.

There are many so-called businesses that do not reach out into commercial fields very far; but a business that actually distributes a merchandise product and undertakes all the responsibilities of that job including advertising, sales to jobbers and retailers, credits and collections, and the thousand and one incidental services under guarantees, trade policies, etc., must have someone in active charge all day and every day in the week.

One of the modern discoveries which facilitate the work of running a business is the so-called budget system, and the experiments conducted with it have been sometimes agreeable and sometimes almost disastrous, but always interesting.

One of the great troubles is that the volume of our business is budgeted according to more or less progressive ideas, sometimes too optimistic, and expenses are budgeted in accordance with those expectations. Then a thousand employees go industriously about disbursing the expense end of the budget, assuming, of course, that the other thousand are equally industrious in taking care of the sales.

In normal times, if the first group of employees are not over enthusiastic, and make no miscalculation, what may be called a normal outgo results. But if the people at the sales end slip up through inefficiency, or if business is generally slack, our business especially so, there is a very different situation.

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In the modern highly specialized business, which primarily depends not on big profits but on big volume for its margin between expense and gross profit, no violent shift need take place to make a very serious hole in the wages of capital and management.

This has by a rather tortuous mental process brought business men to a realization of two principal things:

1. The budget must in some way vary the expenses in accordance with fluctuating business, and especially if the fluctuation is downward.

2. Budgets are not self-operating, and especially the expense end of them. Someone must watch and work at them constantly to keep them four-squared with themselves, in respect to both expense and sales.

Obviously, fluctuations in the business tide cannot be met instantaneously. If sales drop it is not necessarily the part of judicious business to drop expense correspondingly.

On the other hand, it may be a sign that greater expense is necessary. It may be that sales have dropped because there is not enough salesforce, advertising, or administration power. But, after giving attention to these departments, if sales are not restored in one, two, or three months, whatever the period decided upon, expenses must be brought in line with the volume of sales, unless the man in control is prepared to swallow the bitter pill at the end of the year.

This part of the program is a matter of being forewarned and coming to a decision as to what leeway may or should be allowed for your expenses, irrespective of your turnover.

As regards the second fact mentioned above, the budget is a problem of administration, and this may only be satisfactorily taken care of by a check that will sound the alarm not merely when expenses as a whole have overreached, or even a month or two later, but if possible, before expenses have become disproportionately large. In other words, "locking the door after the horse is out," carries little satisfaction.

It has also been discovered that the budget cannot be dealt with "in the large." It is not enough to know that a division or department is wrong; the "budget control" must go pretty well down the line to individuals and processes so that there will be no great delays on the part of the department heads and others in finding out where the trouble lies. It is the task of business men to tell accurately where they are short. They should, therefore, pattern their budget control very largely on the budget itself and cover substantially the same detail.

"Life," as Elbert Hubbard sagely though profanely remarked, "is just one damn thing after another." It would require the genius of a superman to anticipate these happenings even a day in advance. Hence, in the absence of a superman it is better to get your information approximately from an "extree," hot off the press, rather than to wait for the more exact monthly or quarterly review.

It would be possible to make up a statement of sales and disbursements for each working day provided the results would justify the great amount of labor involved. Such a report would, however, be more confusing than enlightening. It would show fluctuation as violent as the fever chart of a typhoid patient and would not be as instructive. Reports, therefore, should come at longer intervals than a day.

A week has been found to be about the correct interval.

In planning the budget, every item of disbursement is prorated if necessary against each week to which it applies. Thus, the cost advertising may not be paid until the following month. But it will be divided among the several weeks of the present month. This is in principle a departure from accounting methods, but the facts are no less correctly stated. The budget control system is a statistical analysis rather than an accounting record.

The budget control is intended to disclose in the form of a running, summarized record:

1. How much has been spent in any given time.
2. For what purposes the expenditures were incurred.
3. Whether the results harmonize with the budget; whether or not the budgeted net income has been realized.

Each week the sales estimated in the budget are entered for comparison with the actual sales in parallel columns on the budget control record. Each expense account is subjected to the same comparison with the budgeted allotment for that account. Unfavorable disclosures are entered in red, favorable in green. That is to say, if the actual sales exceed the budget, they are entered in green; if more is charged to a certain expense account than was estimated in the budget, the result is reported in red. From month to month the running total is set up for the elapsed portion of the year.

But this alone is not a complete analysis of the situation. Expense disbursements and sales may exceed the budget in the same proportion, and although the expense items are all red, it is not necessary to see red on inspecting the budget control sheet. In order to make the analysis complete the relative percentages must be included.

If a business of \$100,000 with a gross profit of 25 per cent and a net of $7\frac{1}{2}$ per cent is anticipated, the expenses can amount to the difference of $17\frac{1}{2}$ per cent, and the budget will so provide. If later the budget control discloses the actual expense disbursements to be \$17,500 or less, all is well so far as that part of the record is concerned. But suppose instead of \$100,000 as anticipated, the sales drop to \$70,000. The 25 per cent gross profit or \$17,500 will then be enough to cover expenses only and there will be no net profit.

In order to disclose this plainly, the budget control should include the percentage which each anticipated disbursement bears to anticipated sales. The actual sales and disbursements should be represented by corresponding percentages.

In the example considered, if 10 per cent of sales is allotted to selling expenses, the amount will be \$10,000 in the budget; but if in spite of decreased sales the actual disbursements equal the amount allotted in the budget, the cost of selling will not be 10 but over 14 per cent.

Whether or not it will be advisable to reduce the salesforce, to increase outlay for publicity, adopt a different production policy or what not, will, of course, rest with the management. The budget control, if properly con-

ducted under a scheme such as that outlined, will at least warn the management of the unhealthy conditions in the business. It will do this early enough, so that prompt action may be taken to stop the seepage before the losses become too great.

No matter how highly optimistic those may be who outline the sales on which the budget is based, the scale of percentages will disclose the proportion of gross profits that have escaped beyond recovery through the numerous sluices—the expense accounts. More than that, the extent to which disbursements have become excessive with relation to any one of these accounts is likewise clearly revealed.

These budget reports are not accurate accounting records. They may differ slightly from the results which the books will disclose several weeks or months later. But they are sufficiently accurate for the purpose of budget control. It is not very important to know in advance that your net profits will be $\frac{1}{10}$ of 1 per cent greater than they are budgeted or that your expenses will exceed the allotted amount by $\frac{1}{8}$ of 1 per cent. Such small variations are not vital in an active business. But when the variations amount to 1 and 2 per cent, the danger signal is shown and the control record is relied on to take the illusions out of the budget.

ASSUMPTIONS OF THE ACCOUNTANT

BY WILLIAM ANDREW PATON*

IMRESSED by the neatly ruled lines and the array of equal footings exhibited by the typical system of accounts and financial statements, the layman is likely to conclude that accounting deals with certainties, with data capable of exact and precise statement; that accounts are either accurate or inaccurate; that the principles and procedures of double-entry, if applied without *clerical* error, will always lead to correct conclusions. Indeed, the accountant at times may be found slipping, somewhat unconsciously, into the same misapprehension. This is evidenced by the attitude of the auditor who spends perhaps many hours of time trying to locate the source of an error of a few cents in the materials account, and then passes lightly over the question of the method of pricing adopted by the management in taking inventory.

Praise-worthy as is an effort to locate and correct clerical mistakes, great emphasis on this side of accounting indicates a lack of appreciation of its more important purposes and of the inherent weaknesses of the art from the standpoint of literal accuracy. As a matter of fact, the accountant is being constantly faced with the necessity for judgments. The accountant, as has been said many times, must be an analyst; he must be able to analyze and pass judgment. Accounting is full of estimate, assumption. At times, unfortunately, the conclusions of the accountant must be well-nigh conjectural. The accountant, it must be remembered, is dealing primarily with

economic data, values, not with physical certainties; and values are highly uncertain and unstable aspects of structures, commodities, rights, services, and situations.

Not only does modern accounting involve estimate and judgment at many points, but the entire structure is based upon a series of general assumptions. In other words, underlying the specific conclusions of the accountant with respect to present values, costs, incomes, etc., are certain fundamental premises and postulates, few if any of which are capable of complete demonstration. Without these assumptions it would not be possible to proceed very far in accounting practice; and hence they become a part of the accountant's "second nature," rarely scrutinized, to be taken for granted. Yet, as just stated, most of these assumptions cannot be proved, and this emphasizes the fact that the practice of accounting is far from being an exact art. Accounting is based upon a list of propositions which are not only incapable of full demonstration but are, in at least several cases, susceptible to serious theoretic criticism.

It is the writer's purpose in this paper to state and examine briefly the more important assumptions on which the work of the accountant rests. In particular, stress will be laid upon the limitations of some of these assumptions. It should be stated emphatically, however, that it is not intended to attempt to indicate thereby that any of these postulates should be discarded. Accounting is a highly purposive field and any assumption, principle, or procedure is accordingly justified if it ade-

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quately serves the end in view—assuming that end to be reasonable, all things considered. On the other hand it is believed that accountants are sometimes in danger of forgetting their own assumptions and, therefore, the limitations of their work. If the accountant sees clearly the foundation upon which he is standing, with all its implications, he is less likely to fall into the mire of improper applications and erroneous, general conclusions. It is safer to see the road on which one is traveling than it is to take it for granted, devoting all one's attention to the internal mechanism of the particular conveyance. An awareness of fundamental assumptions should promote, rather than discourage, rational detail practice.

What are these assumptions of the accountant? Upon what premises does he proceed? And to what extent are his basic propositions valid? An attempt will now be made to answer these questions.

II

To start with, the accountant almost universally assumes the *existence of a distinct business entity*. The unit of organization with which he is chiefly concerned is the specific business enterprise. Accordingly, it is convenient for him to assume that this enterprise or business situation has a distinct existence, that it constitutes a real institution through which flows a stream of values and in the operation of which several, perhaps many, individuals have a part. It is "the business" whose financial history the bookkeeper and accountant are trying to keep; the books and accounts are the records of "the business;" the periodic statements of operation and financial condition are the reports of "the business;" the assets are the properties of "the business," and the liabilities, its obligations.

This assumption of a business entity so widely adopted by accountants, somewhat apart and distinct from the actual persons conducting its operations, is a conception which has been greatly deplored by some writers and staunchly defended by others. The question arises, is it valid? Is there any such thing as "the business," a something having an independent and real existence? Or has this postulate nothing to do with the facts of the case?

The business enterprise is, of course, not a person. Hence, to speak of it as a person or to endow it with personal attributes is to make use of figures of speech. But this does not mean that the particular business enterprise has no real and measurably distinct existence. A particular enterprise is an institution, not a person; but an institution may be a very real thing. We are all living in the midst of a complex system of institutions. The federal government is not a person but there are few things more real, as most of us have come to appreciate these last few years. The University of Michigan is an institution, not a person, but has none the less a distinct existence. Destroy all its current properties, scatter its staff, and the institution would doubtless still persist in some fashion. Similarly the business enterprise may have its reality. It is not always a mere figment of the imagination. It may be a living organism, in some cases huge, powerful, overshadowing, exerting a tremendous influence in the industrial process. The accountant's assumption is based on fact. There is, at least in many cases, a genuine business entity.

In the case of the corporation this assumption is validated from the legal side. The corporation is a real entity, endowed by the state with all the privileges of any business person. It may acquire title to property, borrow money, engage in virtually any recog-

nized business operation, hire labor, buy and sell merchandise and other property, etc. In this case, the accountant's postulate is given flesh and blood by governmental authority. In general it may be said that the *corporation*, not its human members, owns the assets, directs the business, borrows funds, establishes dividend policies, and so on. From the legal point of view, evidently, the accounts and statements in this case exhibit nothing more nor less than the affairs of the corporation.

In the case of the sole-proprietorship, so-called, and the partnership, it must be admitted that, in general, the law does not acknowledge the existence of any business entity. The Revenue Act of 1917, it is true, provided for an excess profits tax upon the income of the unincorporated business, thus recognizing a taxable business entity in this case as well as in that of the corporation; but the view established in this act may be said to be exceptional in American law. For the most part there is no sharp distinction from the legal standpoint between the business affairs of the sole-proprietor or partner and his other interests. There is here no segregation of business assets as in the case of the corporation. The residence of Jones, the grocer, for example, from the standpoint of the satisfaction of creditors in the case of insolvency, is in essentially the same position as is his store building.

But the legal point of view does not furnish the sole criterion. The law may look upon the partnership as merely a contractual relationship between two or more persons, and yet, there may be a business entity involved from other standpoints. A business need not be incorporated to become a distinct institution. Many an important business has been built upon the sole-proprietorship or partnership plan.

Acquiring clientele and business standing, developing characteristic methods, exercising a powerful influence in the business community, swallowing up a succession of owners and managers with scarcely a ripple as affairs changed hands—such a business often has gone on for many decades. The great private banking houses of England and this country are good examples. There is nothing imaginary about the reality and continuity of existence of some of these venerable institutions.

The general proposition requires little argument for its justification. The concept of the business entity is constantly used outside the corporate form of organization by economists and others interested in the business process. The same view is solidly established in the business man's psychology as is evidenced by the fact that the expressions "house," "concern," "company," etc., are applied freely to the unincorporated enterprise.

There are, of course, many situations requiring the use of accounts and other statistical records which are in no strict sense business enterprises. Something in the way of accounts may be needed in connection with the record of an individual's investments and personal property. One meets an occasional enthusiast who is obsessed by the fascinations of "household accounting." Clubs, societies, and other organizations outside the business field need a systematic record of their financial transactions. In some of these situations a distinct entity may be involved, but, evidently, they do not constitute *business* institutions.

Even in the business field, situations so simple and temporary arise that there is little excuse for the conception of a business entity. To conceive of the business of the pop vendor at a football game as having any distinct existence, to take an extreme example,

would obviously be quite fantastic. The importance of the "entity" depends upon the circumstances of each case. Enough has been said, however, to justify the statement that the assumption of a business existence is based to an important degree on the actual facts of the business world.

On the other hand, there is a danger that this assumption may be carried too far. The fact of the independent existence of the business entity must not be overstressed. No institution, however real, has any absolute existence. The accountant must remember that human beings are the immediate means by which the affairs of a business institution are conducted and that, in particular cases, it may be necessary to focus attention directly and exclusively upon the individual owners and managers and their acts. The courts have long recognized that the apparent act of the business must sometimes be construed to be the act of an individual owner, and that, in other cases, the apparent act of the individual may be virtually the act of the institution. In order to get at the essential realities of the situation it is accordingly sometimes necessary to brush aside formal evidences and transactions. This is indeed just as true in the case of the close corporation as in the partnership or sole-proprietorship. If *A*, for example, owner of ninety-nine per cent of the stock of the *A* Company, "borrows" a million dollars from the corporation, this approaches, from the common-sense standpoint, a plain retirement of capital. To say that the capital of the corporation is not impaired because it has a claim of one million dollars against *A* would be advancing a dangerous doctrine. Suppose that fifty per cent of the assets were liquidated in this fashion. Would the Bureau of Internal Revenue still admit that the invested capital of the

corporation were unchanged? To do so would amount, in essence, to allowing *A* both to have his cake and eat it. It would be a case of counting funds which had been transferred from one pocket to another, in duplicate, as if they were in both pockets simultaneously.

Many further illustrations might be given of situations in which the business entity must be ignored by the accountant. In general it may be said that the relations between the "business" and its individual owners and managers must be considered as being on a different level from those between the business and outside persons or entities. Directors' borrowings, officers' salaries, partners' drawings, purchases by a corporation of its outstanding securities, are cases in point. A blind insistence on the independence of the business entity in such situations is bound to lead to false conclusions. Just as the courts refuse to allow the corporate institution to be used as a shield for illegal transactions, so the accountant must refuse to permit the essential nature of certain transactions to be obscured by a business-entity smoke-screen.

Some might contend that the accountant makes no such universal use of this assumption as has been claimed above. The accountant, it might be urged, adopts the viewpoint of the proprietor, the individual or individuals who largely control the business, and constructs his system of accounts and statements on the basis of the relation of the business transactions to this specific person or persons. Now while it is true that many statements of accounting theory have been couched in terms of proprietorship, the writer does not believe that the practitioner had ever abandoned the business-entity conception. Consciously or unconsciously, he adopts this assumption as

a basis for his work. He prepares the balance sheet of the X Company, not of the stockholders of that enterprise. Even the partnership or sole-proprietorship balance sheet is headed with the firm or house name, if there is one, rather than the names of the individual proprietors. No one would think, for example, of listing at the top of the balance sheet of a certain large publishing concern the names of the score or more of partners making up its proprietorship. It is the balance sheet of the *business*, not of its various owners, in which we are all interested.

Accounting theory is much less rational than practice at this point. In spite of the tremendous development of the corporation in the last few decades, most writers, unfortunately, persist in attempting to state the philosophy of accounts in terms of the conditions of the small sole-proprietorship. The result is a system of concepts and principles highly inapplicable to the facts of modern business organization. This is the day of the *business enterprise*; and the accounting theorist must thoroughly realize this fact. The accounting structure must be stated in terms of the needs and conditions of the business enterprise in its entirety. This is especially important in view of the emphasis placed nowadays upon the uses to which accounts may be put for managerial purposes. The conception of the manager must be exactly that of the business entity as an economic unit. And if, as is repeatedly said, the most important use to which modern accounts can be put lies in the rationalizing of business administration, the accountant must of necessity adopt the viewpoint of the manager in large measure.

III

Not only does the accountant assume the existence of a business entity, but

he also, as a corollary, takes for granted *the continuity of this entity*, i.e., he assumes that the business with which he is dealing is a "going concern." This second assumption, it need hardly be said, is largely one of convenience. No one is in a position to predict, with certainty, the future of a *specific* business. Business in general is reasonably sure to go on in some fashion; but specific assurances of success are not found in this fact. All business involves the speculative element, although in some cases it is much more pronounced than in others.

On the other hand the going-concern assumption is entirely reasonable. In the absence of evidence which gives a definite presumption to the contrary, it is surely fair to assume that the particular business is going to continue, at least for the near future. In the case of large and strongly entrenched enterprises the assumption approaches practical assurance. Further, when the number of business enterprises in the United States is taken into account it is clear that the percentage of failures in a particular period, according to experience, will be very small. The accountant accordingly has the right to take it for granted that the specific concern in which he is interested will continue to operate for some time. Conceivably bankruptcy may occur, but it need not be anticipated in the accounts.

The going concern is more nearly the normal entity than the seriously embarrassed or insolvent business. In developing accounting principles and procedures the accountant, accordingly, uses the going concept as a basis. It would certainly be unreasonable to set up the conditions of insolvency as a background in determining present values, effective liabilities, etc. Thus, we have the principle that the assets of a business should be revalued for bal-

ance sheet purposes on the basis of their "value to the going concern." This rule or standard of measurement is, of course, especially important in the valuation of the fixed properties. The immediate market value of the highly specialized machine bolted to the factory floor is likely to be very much below its cost less conventional depreciation.¹ The liquidation value of a factory building may be even less. A railway road-bed and track furnishes a still more extreme case of the discrepancy between use value and immediate selling price. In general, costs less systematic depreciation are considerably higher than immediate selling values in the case of plant and equipment assets.

Similarly the legal liability in the case of insolvency may differ from the effective accounting liability from the standpoint of the going concern. The face or par value, i.e., the amount to be paid at maturity, is usually conceded to be the legal liability² and the amount which would become effective—as a base figure at least—in the case of reorganization or complete liquidation. But in the case of a heavily discounted bond issue running for, say, twenty years, the true accounting liability at the end of the first period, for example, would be simply the original principal or actual investment plus any accumulated discount (true interest accrued and unpaid). By the date of maturity the accountant would have accumulated out of earnings the difference be-

tween original principal and the face or par sum; and the accounting liability and the lump sum payable would then be identical. Likewise, the current effective accounting liability of the United States on account of "War Savings Stamps" outstanding, is not the par sum which must be paid at maturity but simply the original price plus the accumulation to date.

The accountant need scarcely be reminded of the profound influence of the conception of the "going concern" upon accounting principles and practices, especially in connection with valuations. Accounting practice is saturated with evidence of a dependence upon this assumption. It has an especial importance in the two connections already mentioned, but has many other applications as well.³

As implied above, this assumption, although incapable of demonstration in the particular case, is thoroughly reasonable and needs little qualification. The accountant should, of course, keep the possibility of financial embarrassment and insolvency in the background of his consciousness. If the trend of events points toward bankruptcy in a particular case the financial reports should be so constructed that all interested are apprised of the situation. The chief reason why the accountant and business man should clearly recognize the use of such an assumption is the emphasis thereby given to the provisional character of the balance sheet statement, even under the most favorable circumstances. A balance sheet is not an absolute statement of fact. The financial history of a business enterprise is a continuous stream, not a succession of mutually independent segments. The accountant, accordingly, in attempting to break up this

¹ This was not always the case during the war. Such was the demand for certain kinds of equipment in 1917 and 1918 that in some instances particular units were sold, second-hand, for as much as two or three times their original cost.

² The face value may be the legal liability but this does not mean that the creditor of the insolvent company will actually receive this sum. The bankrupt seldom pays "one hundred cents on the dollar." Further, it is doubtful if any court would rate a heavily discounted security issued shortly before insolvency on the same basis as a security which represented an investment of one hundred per cent of par.

³ In public utility valuation, for example, the fact of establishment in itself, of being a "going concern," has sometimes been held to give rise to an additional value, an intangible asset akin to good-will.

history into definite periods, setting a balance sheet at either end, must sever many real connections, hazard many judgments. The future is uncertain; and yet the validity of the statement of asset values as of December 31, 1920, for example, depends in large measure upon the future course of events. In presenting a balance sheet what the accountant says, in effect, is this:

Here, managers, directors, stockholders, creditors, bankers, and others interested, is a balance sheet of the X Company as of the close of the last fiscal period. *Assuming that the Company is going to continue operations successfully*, I adjudge the statement of the assets and liabilities presented herein to be reasonable.

IV

We may now turn to certain more specific and technical postulates of the accountant. First among these will be considered the assumption that in every business enterprise an equation exists between the total of the properties and the total of the representations of ownership, proprietary and other elements combined; the assumption, in other words, that the total of the assets of every business is equal to the total of the liabilities.⁴

This proposition is probably the most nearly capable of a "surface" demonstration of any of the accountants' premises. In a sense, these two classes are merely different aspects of the same situation. The assets represent a *direct* statement of the value of the properties of the enterprise; the liabilities represent an *indirect* statement of the same values. In one case the accountant is listing the objective properties; in the other he is recording the proper distribution of the asset total among the various individuals and interests having claims therein. In one

case attention is being focused upon the objects for which funds have been expended; in the other, upon the sources of these funds. The total of the properties constitutes the total of the wealth or capital, in the broad sense, of the enterprise; the liabilities express the dispersion of this capital among the various equities involved. And since the same measuring unit, the dollar, is used in stating both classes of data, the totals are inevitably equal.

Yet, this equation is far from being an absolute statement of fact; it is easy to exaggerate its intrinsic validity. It, too, savors of a proposition of convenience. What the accountant is saying in starting with this premise is simply this: "I find the total of the assets of a business situation to be such and such an amount. Next I divide this amount among the various proprietors and creditors in accordance with what seem to be the legal rights and privileges of each. My two lists now constitute a balance sheet." Evidently the determination of the liabilities or equities, at least as far as the total is concerned, is a secondary process which is based directly upon the amount ascertained to be the total of the assets. A serious assumption, incapable of any complete validation, is here involved. Why should the legal and economic rights in a particular business situation be considered to equal precisely the sum of a list of asset values arrived at by divers and sundry processes of valuation? As a matter of fact they do not, in the absence of immediate and complete liquidation.⁵ The equity of the common stockholder, for example, is expressed in the corporate balance sheet by what is left over, the residuum of the asset total after all prior equities

⁴ This term is used here in the conventional balance sheet sense.

⁵ And even in the case of liquidation, as already noted, asset values based upon the "going concern" conception would probably not be realized, and hence would not express accurately the various real equities in the situation.

have been deducted. Does this represent the true equity of the common stockholder in any fundamental sense? Is not this arrangement largely a matter of convenience? To what, precisely, is the common stockholder entitled? Not to what he originally invested nor to this balance sheet residuum. As far as the assets are concerned, he is entitled in the case of liquidation to any balance available after all other claims are met. In the case of forced insolvency this amount is likely to be nil or negligible and to bear little relation to any previous balance sheet figures. In addition, he has a right to a share in all the excess future earnings of the company, a right the realization of which, however, is more or less contingent on the specific policy of the board of directors. Is it not evident, under these circumstances, that the usual balance sheet representation of the residual equity is a very imperfect statement of the situation?

The "book value" of the stockholders' interest in the corporation is a highly conventional thing. It can be explained only as the process of asset valuation is explained, a process which, as we shall notice shortly, is itself based upon numerous assumptions. No wonder that the market price per share seldom approaches book value and often does not even follow its trends! Because of the control of management vested in the common stockholder and the possibility of future returns, common shares sometimes have a market value, when according to orthodox principles and rules of valuation there is no book value whatsoever.

In the case of the creditors' claims the amounts attached by the accountant are likely to be somewhat more reasonable. In general—ignoring unaccumulated discounts, unamortized premiums, and annuities—it may be

said that the accountant regards the sum due at maturity as the true liability. In the absence of insolvency this is the amount which will finally be realized by the contractual investor; it is likely to approximate the original principal; if the company becomes bankrupt, there is yet some possibility of the creditor's receiving the full amount. Consequently, there is a large element of precise fact in the balance sheet figures which are attached to the contractual equities. Even here, of course, the market value of a particular bond or other similar security may vary noticeably from the amount appearing in the issuing company's financial statement.

It should be emphasized, however, that even if all the liabilities proper were stated with absolute precision and were shown at figures representing real significance in every case, but the residual equity were shown for convenience as the difference between the asset total and all other equities, the equality of footings of balance sheet classes would still be a matter of assumption.⁶

In view of the fact that the statement of the stockholder's equity in the balance sheet, as has just been indicated, is likely to be the most questionable of any balance sheet item, the stress placed upon the "net worth" figure in current statements of the theory of accounts is perhaps not entirely justified. The implication seems to be that there is something peculiarly valid about this concluding figure. While it is true that this residual figure is of especial consequence to the accountant, its importance, in the case of the corporation at any rate, does not lie in its accuracy or precise validity as an expression of the equity of the buffer interest. It is rather of especial signifi-

⁶ The footings as given are, of course, equal. But the question is, are the two classes of data *really* equal? The accountant *assumes* an affirmative answer to be correct.

cance to the accountant, because it is his doubtful territory. It is the place where all his peculiar estimates, hazards, adjustments, etc., "come home to roost." Its *trend* is of much more importance than its exact amount on any particular occasion, for, if consistent methods of valuation are followed, its increase is a fairly reliable evidence of operating success and growing financial strength, while its diminution indicates just the reverse situation.

The writer has no intention of attempting to show by the foregoing that the equation postulate of the accountant is unreasonable or improper. It is instead a thoroughly rational and essential premise, upon which depends, in a sense, the entire technical structure of the accounts. Certainly, the equation of assets and liabilities, as has been pointed out repeatedly, is the foundation of the double-entry system. And, as was stated at the outset, the equation holds, in the limited sense indicated, for every business enterprise. In the nature of the case the asset total, dispersed among the equities, gives another equal class. The assets are the only objective residence of value. At a certain date they are found to total up to a particular sum. It is then entirely reasonable, indeed unavoidable, to state the evidences of ownership and claims against the business in these terms. There is no alternative. Future earnings are indeterminate; the amounts which will finally be withdrawn are unknown (at least as far as the residual interest is concerned); a stating of equities in terms of property values is then the only feasible procedure.

It is desired, however, to suggest that the accountant should not take this balancing equity figure too seriously. It behooves him to be fully cognizant of the underlying process by which this figure is ascertained, and

thus to realize that it is not an independent and directly determined fact.

Finally, it may be noted that there are certain situations outside the business enterprise proper which do not present an equation of assets and liabilities in the ordinary sense. Perhaps the most important case is the governmental unit, federal, state, or local. A government may owe huge sums far in excess of the value of the assets to which it has specific title. Thus, the federal government has outstanding several billions of obligations in excess of its assets. Its total of liabilities, stated in terms of sums due at maturity, exceeds its assets, and yet it will ultimately pay one hundred cents on the dollar. The state, of course, has the power to tax, and thus ordinarily possesses potential control over sufficient assets to liquidate all its obligations. But since the tax power in itself is not an asset that can be evaluated by ordinary means, it is not possible to prepare a conventional balance sheet for the government.

Similarly, the individual sometimes "mortgages his future" and borrows sums for consumption purposes. A college student, for example, may have liabilities galore but no assets in the usual sense. Yet, his creditors may consider him "perfectly good." The liabilities are capable of definite statistical expression in terms of sums due in the future, but there is no way of assaying the future assets. The student has a one-sided balance sheet. No equational statement is possible.

V

This brings us to another, somewhat related, balance sheet postulate. The accountant commonly assumes that all facts expressing the financial status of an enterprise can be presented in the two classes, assets and liabilities, meas-

ured in terms of the dollar. That is, he assumes *that a statement of assets and liabilities in dollars and cents is a complete representation* of the financial condition of the enterprise on the date of the statement.

This proposition not only cannot be demonstrated but it can be pretty thoroughly disproved. The balance sheet, as a true statement of financial condition, should not be taken too seriously; it has very definite limitations under the most favorable circumstances. In the first place, as has just been indicated, the future costs, earnings, and losses of a business enterprise are largely indeterminate; and yet the reality of the present values depends essentially upon the assumption that the business will be at least moderately successful. A balance sheet statement of asset values is really only provisional; it depends upon the future for its validation.

In the second place, there are many vital considerations and conditions involved in every business enterprise of such a character as completely to escape classification as assets and liabilities and measurement by the dollar. In the individual's economy, for example, health, energy, resourcefulness, skill and similar qualifications and endowments, may be of much greater ultimate consequence, even from a strictly economic point of view, than a disposal over a considerable sum of present wealth. These and other "imponderables" are also of the utmost consequence in business. The phrase "moral risk" is sometimes used in business to indicate such factors. The note of a man of unquestioned integrity, for example, may be better security than a lien upon specific assets. Our college student, as was stated above, may be a "good risk." In the business enterprise a well organized and loyal personnel may be a much

more important "asset" than \$50,000 worth of merchandise. In other words, the loss by fire, for example, of goods valued at that amount might not be nearly as serious a matter as the disruption of the staff. Location, trade-name, clientele, established demand, and similar considerations are likewise of extreme importance. Such conditions come to definite expression as assets if they are paid for; otherwise they find no place in the ordinary balance sheet.

Until some scheme is found by which these imponderables of the business enterprise may be assayed and given definite statistical expression, the accountant must continue to prepare the balance sheet as he has been doing. At present there seems to be no way of measuring such factors in terms of the dollar; hence, they cannot be recognized as specific economic assets. But let us, accordingly, admit the serious limitations of the conventional balance sheet as a statement of financial condition. How frequently do we note a business which shows a highly favorable "statement of financial condition" and then, within two or three years, because of a change in management, a lapse of demand, the advent of new methods, a decline in labor efficiency, etc., we find that the supposed values have evaporated and that the business is insolvent or financially embarrassed! The stockholders and others interested should realize that the balance sheet, even if the underlying accounting is thoroughly sound, is an imperfect representation of the current condition of the enterprise and only an indication of its probable position in the near future.⁷

⁷ The balance sheet of the large and complex enterprise is, of course, also likely to be imperfect for various technical reasons. The taking of inventory, for example, may consume several weeks, and the final figure placed in the balance sheet will accordingly be no more than an approximation of the value of goods on hand at the precise date of the statement.

The accountant, of course, commonly recognizes the fact that the balance sheet has serious limitations. In some instances he even tries to allow for the future by appending statements of "contingent" assets and liabilities. That is, if there are potential assets or potential liabilities in the situation, which are sufficiently in sight to be more than bare possibilities, it is considered good practice to indicate these elements, in some supplementary fashion, in connection with the balance sheet.

There is still a further assumption made by the accountant which is of especial importance in this connection. Not only does he commonly take it for granted that the entire financial status of an enterprise can be set up as assets and liabilities measured in terms of the dollar, but in general he assumes that the *value or significance of the measuring unit remains unchanged*. This postulate is, of course, not sound. The value of the money unit, the accountant's standard of measure, is constantly fluctuating. In periods of rapidly advancing or declining prices this fluctuation is a serious matter, most unfortunate for the accountant or other economic statistician. One of the fundamental limitations of accounting arises here. Since the measuring unit is unstable, comparisons of successive financial statements are likely to lead to erroneous conclusions, unless great care be exercised in making such comparisons. The increase in assets in dollars and cents during a particular period, for example, may be unreliable as an evidence of increase in the actual stock of structures, commodities, etc.; instead it may largely reflect simply the application of a less significant measuring unit to an amount of physical goods no greater than the supply at the beginning of the period. Similarly, the net income balance may be a very

imperfect indication of genuine improvement in economic well-being; and an enterprise may build up a huge surplus account in a period of rising prices without increasing its stock of goods or enlarging plant proportionately.⁸

It would not be fair to imply that the accountant does not recognize that his measuring unit is unstable—although perhaps it may be said that the fact is not always given sufficient prominence in his work. But, nevertheless, he sets up comparative statements of income, surplus, assets, etc.; he values fixed assets on the basis of cost less depreciation; and in various other ways he makes use of the assumption that the dollar has a constant value. Various schemes have been discussed by means of which the accountant might take closer cognizance of the fluctuations in the value of money, but as yet there have been no developments of consequence in this direction.

VI

The accountant makes several important assumptions in connection with costing and valuation. In the first place, he assumes that *cost gives actual value for purposes of initial statement*. This is one of the most important premises underlying technical accounting. Its necessity is plain. *Cost* is the only definite fact available when a property is purchased, constructed, or otherwise acquired. It is accordingly entirely reasonable to charge the appropriate asset account with the amount of this cost in any case. It is a part of the accountant's business to record what has actually happened, to set down a systematic statement of all

⁸In "Depreciation, Appreciation and Productive Capacity," *Journal of Accountancy*, issue of July, 1920 the writer, discusses some aspects of the relation of the change in the value of money to the accounting for plant and equipment assets.

explicit transactions. It follows as a matter of course that he will assume the original value of an asset in the hands of a particular enterprise to equal its cost.

To put the matter in other words, the accountant, like the economist, postulates a world full of *rational* business men. He assumes that every exchange is fair, that buyer and seller are in every case equally informed and equally gifted in ability to trade. If a manufacturer pays \$500 for a unit of equipment, for example, this means that the true value of the unit *to him* is \$500, and that this amount, therefore, should be entered on the books as an asset. Under all circumstances, business men are deemed to proceed rationally. Coercion, fraud, bad judgment, carelessness—all these factors are in general assumed to be entirely absent from business transactions.

This is, of course, not literally the case. Business transactions are not actually equal exchanges; for the parties involved are not always equally strong or fortunate. Losses occur in actual purchases as well as in other connections. No one is infallible. How often the individual, in his personal economy, comes to feel that he has dismally failed to get full value for his expenditures! Similarly, the business man proceeds unwisely in many of his commitments.

But, as stated above, in the absence of definite evidence to the contrary, the accountant has every right to treat initial value as equivalent to cost. It is difficult to see how he could proceed otherwise. He cannot set himself up as an absolute judge of values. If the transaction is entirely voluntary, and both parties thereto appear satisfied, he is justified in treating the figures that appear in the exchange as bona fide values. Later, if substantial evidence of depreciation or original loss

is adduced, it will be time enough to revise the initial figures.

An initial record of total cost would, of course, be necessary even if cost and original value were not identical. However, if it immediately became evident in any case that real value were greater or less than cost, the profit or loss could be recognized at once. But seldom, indeed, does the accountant attempt to pass judgment upon the validity of bona fide purchase price as a determinant of initial asset value.

An asset may occasionally be acquired by gift, accident, "strategy," etc. In such a case, the accountant would usually admit that, if the asset were one which had a determinate purchase and sale value, the fair market value of the asset so acquired should be set up in the accounts; for otherwise the existence of a definite property would be concealed so far as the accounts were concerned. On the other hand most accountants would probably agree that cases may arise in practice where cost greatly exceeds initial value. In general, however, the cost-gives-value assumption is rigidly adhered to.

In the second place, the accountant makes the closely related assumption that the value of any commodity, service, or condition, utilized in production, *passes over into* the object or product for which the original item was expended and *attaches to* the result, giving it its value. This postulate is the essential basis for the work of the cost accounting; without it, there could be no costing.

Just how valid is this assumption? In attempting to answer this question it may be noted first that the physical essence of assets utilized in production does not always literally pass into the product. Even in the case of raw materials there is much in the way of waste. The fixed assets, of course, contribute

nothing to the product but certain essential conditions. Similarly, supervision and any other services do not attach directly to the physical output. Evidently, there is no complete and clear-cut physical connection between cost items and product on which the accountant can base his premise. Further, even if there was such amalgam of the commodities used in production, this would not mean that the original values had literally passed into the result. A dollar's worth of gold in a watch case may be worth intrinsically somewhere near a dollar. But the value of the recoverable steel from even a new automobile would be much less than the value to the manufacturer of the materials used in fabricating the car.

To the economist this is perhaps the most interesting of all the accountant's assumptions. It constitutes a sort of "labor theory of value." The accountant assumes that work in process—in all its various stages—and finished stock are worth for balance sheet purposes the sum of the labor, material, and other costs expended in getting these results. He assumes that in some mysterious manner the values of these original commodities and services, which are worth cost for purposes of initial statement, pass over into and inhere in the object for which they were utilized. This is clearly an application of a cost theory of value to the internal conditions of the specific enterprise. Values are acquired in various original forms; then they are converted into inchoate and, finally, finished goods.

So far as price determination is concerned this is, of course, unsound. Costs, a partial explanation of supply limitation, undoubtedly influence prices. But the influential cost is not the specific cost to the business enterprise in which the accountant is concerned, but rather the cost to the mar-

ginal producer, whoever and wherever he may be. The specific cost has, in the production of standard goods, little or no influence on selling price.⁹ If a particular producer's cost is high, due to labor inefficiency, mismanagement, accident, or other cause, this will not make the product worth any more to the consumer nor enable the producer, who must compete with others in the same field, to advance the price to a point which will cover the unusual expense of production. Further, unless production is directed toward effective demand, output may be of little or no value, regardless of its cost. Or if demand suddenly lapses, the fact that costs are such and such a figure will not in itself hold up price.

The accountant, however, is not trying to determine selling value but cost value. He is asking the question, "what are the costs of this particular enterprise?" Evidently, this is a matter of fact (although it may be very difficult to get the correct data). It is the accountant's business to report the actual costs, whatever the figure. It is entirely natural, then, if he finds at the end of a particular period that a certain fraction of the total costs incurred are still within the business, or at least have had nothing to do with current sales, to conclude that these values attach to work in process and finished stock to the extent that they have been utilized. Since these costs bear no relation to current business, they must be held back; later they will be passed on as expense, conceived as embodied in finished product. To place the deferred amount in the balance sheet as an asset involves, of course, precisely the assumption that we are considering. But since these

⁹ Many would disagree with this statement, but the writer believes it is essentially sound. On the other hand, in the case of specialized goods and equipment produced to order, specific *estimated* cost undoubtedly plays an important part in determining selling price.

values are not an expense, or cost of current sales, they must represent either an asset or a loss. If the continued production of the commodity or service in question is in prospect it is accordingly entirely reasonable to place these values in the balance sheet.

The Bureau of Internal Revenue permits the work in process and finished stock of the manufacturer as well as the stock of the trader to be inventoried at "cost or market, whichever is lower." To the extent that this rule is followed by the accountant, he is evidently not adhering to the assumption we have been discussing. Nevertheless, it constitutes, in general, one of the most important premises of accounting.

VII

The accountant assumes, as has just been indicated, that costs *accrue*, that is, that the values of structures and commodities utilized in production gradually expire and attach to work in progress. He limits this assumption, however, to costs from the point of view of the particular enterprise, disregarding the margin between this figure and cost to the purchaser, or selling price. In other words, he assumes that expense accrues but that net revenue or profit suddenly appears, full-blown, on some specific occasion, commonly that of the sale. Here we have another premise of consequence. It means that the accountant's "expense" for the particular business and the economist's "cost of production" are two quite different things. The economist is talking about price determining cost, the cost to the purchaser. From this standpoint cost and selling price, at least in the marginal instance, are essentially equal. Cost in this sense includes not only the marginal producer's outlays but his net return as well. Thus, the economist assumes that

business net revenue, in part at least, is an essential cost of production, an element which price must cover if production is to continue in satisfactory volume.

On the other hand, the whole scheme of accounting is based upon the plan of showing as costs or expense only the expirations of *purchased* commodities and services, not the economic value of the services contributed by the business itself in furnishing capital and management. The accounts are organized so as to disclose the difference between expense and revenue as a residuum, a balance. And this margin of value, the net revenue, is assumed to appear, with respect to the particular transaction, *in toto*, not to accrue. Purchased commodities and services are assumed to expire steadily and pass into the expense category; services furnished by the business and its owners are assumed to accrue only as sales of finished product are made.

This is, of course, poor logic. If the value of work in process accrues because of purchased commodities and services utilized, it would seem to be reasonable to assume that the values contributed by the enterprise are likewise accumulating. To admit this, however, would involve the recognition of profit prior to completion and sale; and this the accountant, in general, steadfastly refuses to do.

Exceptions are occasionally met with in practice. In long-term processes a percentage of income is sometimes taken into account prior to sale; but in general there is no rule of accountancy more rigorously insisted upon than the principle that no profit can be realized prior to sale. And this, as just explained, involves the assumption that costs accrue but that income does not.

In the case of rent, insurance, and other costs, where payment is made for the service involved on a time basis,

the accountant commonly takes it for granted that the cost accrues with precise uniformity.

That the depreciation of fixed assets is uniformly continuous is an interesting and important subsidiary assumption in this connection. The only method of apportioning depreciation widely used in practice involves the assumption that the values of fixed properties expire continuously and uniformly. In the nature of the case, the accountant must apportion depreciation on the basis of assumptions of convenience. The whole depreciation analysis must be based upon a series of estimates. In the entire life of a fixed asset but two explicit transactions arise, purchase and abandonment. The situation between is entirely obscure. A machine, for example, is purchased and installed at a cost of \$1,000. It is estimated that the service life is ten years. This is the first assumption. Second, it is estimated that the salvage value less demolition expense is \$100; another assumption. On the basis of these assumptions, then, the total depreciation during the life of the unit is \$900. The accountant is now faced with the problem of apportionment. He has two figures: cost, a known fact; and net salvage, an estimate. It is his problem to bridge the gap in time, estimated at ten years. How shall this total depreciation be spread as a cost of product throughout the period? In the nature of the case his decision will be based again on assumption.

Three or four principal alternatives at once present themselves. First, shall the depreciation be assumed to be a function of physical product? That is, shall each item, pound, or other unit of product be charged with so much fixed asset cost? Evidently, no definite physical connection could be traced on this basis. It might also be pointed out that deterioration is going on stead-

ily in most cases regardless of the number of units of output. In fact, in some instances inactivity accelerates the process of disintegration and decay. Yet, this assumption would not be wholly unreasonable. The assets are acquired because their services are deemed to be necessary in turning out product. Why then should not each unit of product bear a proportionate part of this total cost? As a matter of fact the depletion of natural resources is commonly computed and charged in terms of some convenient unit of output.

Or shall depreciation be assumed to accrue in terms of the value of gross revenue rather than its physical volume? This idea again has much to commend it from the standpoint of expediency. And it has been adhered to in business practice to an important degree. Formerly, some business managements followed the policy of making heavy depreciation allowances in years of large gross revenues and smaller or even no depreciation charges in lean years. The current practice of incurring heavy maintenance costs in boom years, and of postponing repairs in dull periods, results similarly.

In general, as stated above, modern practice assumes depreciation of plant and equipment assets to be continuous and uniform. The "straight line" method of apportionment is the technical expression for this assumption. Thus, in the above illustration, the depreciation according to this plan would be ten per cent each year of the total depreciable amount, or \$90. This is the scheme now almost universally followed. Yet, obviously, there is no way of demonstrating its validity. True, as already noted, there is evidence that the processes of deterioration are more or less steady and uniform, though not perfectly so. And no doubt these inevitable processes are the

important physical expression of value depreciation. But depreciation is lapse in value. It is a value problem and it can never be shown that this value expiration is a direct function of physical processes. If value were a physical essence it would be possible, no doubt, to attach some sort of gauge which would exactly measure its flow. There are still some who believe that valuation will sometime be reduced to an exact physical process. But an appreciation of the true nature of value, an intangible aspect of structures and commodities, should make it clear that this is out of the question. Valuation will always involve specific judgments and general assumptions.

VIII

One further class of assumptions will be discussed. At various points the accountant finds it necessary to adopt certain premises with respect to sequences of data and relationships between series of facts. For example, he commonly takes it for granted that a loss in asset value falls upon or extinguishes the most recently accumulated proprietorship. Thus, expirations are commonly charged first against gross earnings or the otherwise net earnings for the period; in the second place, they are charged against accumulated profits; and they are charged against the accounts showing original investment only as a last resort. In other words, losses are assumed not to have any effect upon original investment until the entire amount of accumulated profit is absorbed.

This is evidently purely an assumption. It has been repeatedly pointed out by writers on accounting that no particular asset has any direct connection with a particular section of proprietorship. The residual equity simply represents an element in the asset

total, not particular items. Consequently, when an asset disappears, it would be just as reasonable to charge the amount against one proprietary account as another. In fact, as it is often the older assets which first expire or are lost, it might be argued that the accounts showing original investments should be used first in the recognition of losses.

This assumption appears entirely reasonable, however, when attention is focused upon the purposes of the accounts. The investors are interested in seeing the margin by which their original equity is increased. It is accordingly quite rational to retain the original figure unchanged, and show all variation, as far as possible, in a buffer account. Even in the case of loss in connection with an original asset, such, for example, as a loss on the sale of the securities of a subsidiary company which were purchased with the stockholders' initial funds, it would be more reasonable, for purposes of financial statements, to charge surplus rather than capital account.

Another assumption which is widely adopted by the accountant is that units of raw materials or merchandise consumed or sold are always taken from the oldest in stock, or, to put it differently, that the inventory is always composed of the units most recently acquired. Here we have an assumption which is, quite obviously, not based on literal fact. It is perhaps true to some extent that the trader attempts to dispose of his oldest stock first, especially in the case of perishables; but in other cases quite the opposite holds. The oldest shipment of coal, brass castings, or of other raw material is quite likely to be at the bottom of the bin.

A justification for this assumption may be found, however, in the fact that the accounts are thereby kept more nearly up to date from the stand-

point of sound economics. One of the basic principles of economic reasoning is the law of single price. Another principle is that, in general, cost of replacement is the only cost which has any influence on the determination of price. In view of these laws the most reasonable interpretation of the "cost of goods on hand" is the cost of the most recently acquired lots.

The Bureau of Internal Revenue, it may be noted, has adopted a similar rule of procedure in connection with the determination of taxable income from the sale of securities. The taxpayer who buys and sells securities, unless he can identify specific lots sold, is obliged to treat blocks sold as arising from the earliest purchases.

The accountant makes use of many other assumptions of this type, but the foregoing illustrations will be sufficient, to indicate the character of this class of premises.

IX

The accountant, to recapitulate, bases his work in large measure upon the following assumptions:¹⁰

1. The specific situation constitutes a distinct entity.
2. The business entity is continuous, is a "going concern."
3. The assets of the business precisely equal its liabilities or equities.
4. A statement of assets and liabilities in terms of the dollar is a complete representation of the momentary financial condition of the business enterprise.
5. The measuring unit, the dollar, has a fixed significance.
6. Cost gives initial book value.
7. The value of materials and services utilized, passes into the resulting material

¹⁰ This is not intended as an exhaustive list, but it is believed that it covers the more important postulates of accounting.

or service and constitutes the latter's value.

8. Costs accrue but income appears only in terms of specific transactions, notably the sale.

9. Depreciation accrues uniformly in time.

10. Asset losses extinguish proprietorship in the order of its currency.

11. The inventory consists in the most recently acquired lots.

Most of these propositions, as has been indicated, are incapable of any complete proof or demonstration. Indeed, some of them can be disproved from the standpoint of literal accuracy. Yet, in view of the conditions and purposes of accounting practice, they are, for the most part, entirely reasonable. They are largely assumptions of expediency, without which it would be impossible for the accountant to proceed.

The accountant, however, should be thoroughly aware of his assumptions, else he is likely to forget the inherent limitations attaching to his exhibits and conclusions. Not only is accounting practice fraught with all kinds of serious technical perils but the entire structure of accounts and the recognized system of procedures is based upon assumptions. In view of this situation, a mild skepticism as to the reliability of accounting data and interpretations, still apparent on the part of some business men, may perhaps be pardoned. Accountancy has taken long strides in recent years; the present interest in the subject is unparalleled. It is highly desirable, in the course of this rapid development, that the pillars of theory and practice be occasionally scrutinized and assayed, with a view to discovering precisely how deeply they are grounded.

USE OF A COST SYSTEM FOR REDUCING THE COST OF PRODUCTION

BY J. LEE NICHOLSON*

IN a general sense, the purpose of a cost system is that of ascertaining and reporting the costs of production. This simple, but obviously correct statement, however, does not satisfactorily express the ultimate purpose which a cost system is expected to serve. Each mechanical unit in a manufacturing plant is expected to perform a specific operation, but the performance is not entirely measured by the physical fact of the required operation having been accomplished. In order that expectations may be realized, a mechanical unit must accomplish its work satisfactorily with respect to quality of work done, and efficiency in doing it. It is precisely the same with a cost system. A cost system must not only ascertain and report the costs of production, but it must do so with a degree of efficiency which will unerringly expose the many forms of waste, whether of time or material, which exist to a greater or lesser extent in every manufacturing business. If a cost system fails to do this, the fact of abnormal waste occurring, will, in the majority of instances, escape attention of the management for the reason that managers are not, as a rule, sufficiently conversant with the procedure involved in the accounting details of a cost system to enable them to directly point out its defects. They rely upon the cost accountant to arrange the accounting procedure in such a manner that actual costs will be shown for material consumed, labor

employed, and overhead expenditures incurred for currently manufactured product, a comparison of such costs with standard costs which may have been established for the plant, comparison with the costs of a previous period, and an adequate explanation of any conditions which may have been responsible for adverse variations. A cost system will accomplish its purpose if these requirements are fully met.

If a cost system is to be instrumental in effecting reductions in the cost of production, it must separately gather the costs of each operation performed upon the product. This is clearly shown by the following exemplification:

Assume the product of a factory to undergo five operations, A, B, C, D, and E.

Also assume that the cost system gathers the total costs only, without reference to the costs of each operation.

The details reported by the cost system are assumed to be:

Direct materials consumed	\$5,000.00
Direct labor employed	3,240.00
Overhead expenditures	760.00
<hr/>	
Total	\$9,000.00
The units of product manufactured amounted to	18,000

The following form of comparative statement was rendered to the management:

The statement appears to be eminently satisfactory, because production is shown to have been increased by 500 units at the same unit cost for the two periods. The five operations through which the product passed, however, are not represented upon the state-

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SCHEDULE OF CURRENT AND COMPARATIVE COSTS FOR JANUARY 1921

OPERATIONS	CURRENT MONTH PRODUCTION - 18,000 UNITS				PREVIOUS MONTH PRODUCTION - 17,500 UNITS			
	Direct Material	Direct Labor	Overhead	Total Unit Cost	Direct Material	Direct Labor	Overhead	Total Unit Cost
1								
Unit Cost	\$ 3,000.00	\$ 1200.00	\$ 280.00	.2489	\$ 2,916.90	\$ 1,066.66	\$ 272.10	.2432
	.1667	.0667	.0155		.1667	.0610	.0155	
2								
Unit Cost	1,500.00	800.00	220.00	.1400	1,458.45	777.77	213.78	.1400
	.0834	.0444	.0122		.0834	.0444	.0122	
3								
Unit Cost	500.00	400.00	90.00	.0549	486.15	388.89	87.46	.0549
	.0277	.0222	.0050		.0277	.0222	.0050	
4								
Unit Cost		500.00	95.00	.0331		536.11	92.30	.0359
		.0278	.0053			.0306	.0053	
5								
Unit Cost		340.00	75.00	.0231		380.57	72.86	.0260
		.0189	.0042			.0218	.0042	
Totals	\$ 5,000.00	\$ 3,240.00	\$ 760.00		\$ 4,861.50	\$ 3,150.00	\$ 738.50	
Totals	.2778	.18	.0422	.50	.2778	.18	.0422	.50

**SCHEDULE OF CURRENT AND COMPARATIVE COSTS
FOR THE MONTH OF JANUARY 1921**

DETAILS	CURRENT PERIOD PRODUCTION 18,000 UNITS		PREVIOUS PERIOD PRODUCTION 17,500 UNITS	
	Costs	Unit Cost	Costs	Unit Cost
Direct Materials.....	\$5,000.00	.2778	\$4,861.50	.2778
Direct Labor.....	3,240.00	.1800	3,150.00	.1800
Overhead.....	760.00	.0422	738.50	.0422
Totals.....	\$9,000.00	.5000	\$8,750.00	.5000

ment. A knowledge of the costs of each operation is important to the management, as a means for determining the following:

1. Estimating the costs in cases where the manufacturing process varies from the regular course of operations.

2. For determining that the results from each operation are up to standard requirement.

By showing the costs for each one of the five operations, the schedule of current and comparative costs, for the month of January 1921, is not as satisfactory as it appears to be. To the contrary, details may be developed which require an investigation.

We will assume the chart on page 804 to represent the amended schedule.

The schedule shows precisely the same details, as to totals, as are shown by the firms schedule; in addition, however, it presents an analysis of the totals, which clearly indicates the variations in the cost of production. Investigation would naturally be directed to the following:

OPERATION 1

The unit cost for the current month
was..... .2489

The unit cost for the previous month
was..... .2432
Increased unit cost for current
month..... .0057

The increased cost is shown by the statement to have occurred as follows:

Direct labor cost, current month... .0667
Direct labor cost, previous month... .0610
Increased cost, as above..... .0057

OPERATION 4

The unit cost for the previous month
was..... .0359
The unit cost for the current month
was..... .0331
Decreased unit cost for current
month..... .0028

The decreased cost is shown by the statement to have occurred as follows:

Direct labor cost, previous month... .0306
Direct labor cost, current month... .0278
Decreased cost, as above..... .0028

OPERATION 5

The unit cost for the previous month
was..... .0260

The unit cost for the current month
was..... .0231

Decreased unit cost for current
month..... .0029

The decreased cost is shown by the
statement to have occurred as follows:

Direct labor cost, previous month... .0218
Direct labor cost, current month... .0189

Decreased cost, as above..... .0029

Although the total unit cost for the two periods is identical, it will be observed that the direct labor cost varied for operations 1, 4, and 5, and that the variation for operation 1 was counterbalanced by the variations for operations 4 and 5. The question requiring an explanation is, "Why did the direct labor cost for the current period of operation 1 exceed the similar cost for the previous period? The fact that the excessive cost was counterbalanced in operations 4 and 5 does not bear upon the question. The gain at those points in the manufacturing process is to be considered as an improved standard of performance. Clearly, the cost system which exhibited the costs under the first of the foregoing schedules, was useless for the purpose of showing the points at which the cost of production was apparently excessive.

To be thoroughly effective, as a means for reducing the cost of production, a cost system must report each element of cost with a degree of particularity which will absolutely prevent the obscuring of losses, from excessive costs, by gains in other directions.

In all manufacturing businesses, the costs are represented by direct material, direct labor, and overhead; it therefore follows that reductions in the cost of production must be confined to one or all of these elements.

It is also quite true that costs may be reducible outside of the actual manufacturing process, that is, excessive costs may be occasioned before the manufacturing process is commenced, or after it is completed. For instance, raw material may lose value, or bulk, as a result of improper handling, before it is put into process, and the improper handling of finished product may be responsible for losses which are ultimately expressed as overhead.

The particular directions in which an adequate cost system will be instrumental in reducing the cost of production, in the case of each element of cost, are as follows:

Theoretically, in the case of the production cost of material, the quantity of material used in manufacturing a given product, taken at its cost to the factory, represents the production cost for material.

The actual production cost for material, however, is represented by its cost to the factory, plus the cost of any preventable waste which may have occurred by reason of improper handling prior to being put into process. Materials represent money, and for that reason they should be accounted for with the same degree of care usually exercised in the case of money.

Raw materials are liable to degenerate in value during the process of being stored, the most frequent causes being:

1. Shrinkage in weight, or volume.
2. Impairment of quality.
3. Obsolescence, by reason of changes in the demand for the manufactured product.

Whatever the cause may be, the resulting loss is a factor which is accounted for as an increase in the cost of production or as a direct reduction of profit, as the case may be. The possibility of such losses will—in all properly regulated plants—be held

within an unavoidable minimum, established from experience. The cost system should effectively expose excesses, otherwise the fact that excessive losses have occurred will be obscured in the inventory, necessitating an adjustment when the book and physical inventories are compared, or when the physical inventory is valued.

In addition to the class of losses to which we have referred, excessive losses often result from defective work, and from the production of an inordinate quantity of scrap material.

Inadequate machinery may be responsible for the production of excessive waste. It is not within the possibility of reasonable dispute that a properly devised and operated cost system will unflinchingly expose any undue waste of material, if the statistical details to be gathered from the system are properly compiled and presented.

When natural causes—shrinkage, evaporation, etc.—operate to produce waste of material before it is put in process, any excessive waste resulting from storing, or handling, should be exposed by comparing the units of quantity or measurement, as deliveries are made from the stores, with the original units of quantity or measurement at the time of purchase. Any excess over the proportion which experience has shown to be unavoidable, is then a proper subject for investigation and correction at that particular time. Otherwise, a shortage in the inventory will be the first intimation of the excessive loss.

Waste of material which takes place during the process of manufacture is principally attributable to defective work, or to the use of larger surfaces, or solid forms, than are necessary for the required purpose, the result being the production of a wasteful quantity of scrap.

In the case of defective work, the cost system should not only report the loss, it should also report the cause and the responsibility for it. Loss occasioned by defective work is usually, to some extent, properly chargeable as a factory cost, but the frequently used method of charging it into the overhead without an analysis being shown, does not assist any efforts which may be made for the purpose of reducing the cost of production.

In cases where wasteful quantities of scrap result, the cost system should be relied upon to check the quantities and official approvals shown upon requisitions with the deliveries made. Responsibility for the use of larger surfaces, or solid forms, will then attach to the official who approved their use.

In the case of waste caused by the employment of inadequate machinery, the cost system should be the means of directing attention to the points where comparisons show the waste to have occurred; the question of applying corrective measures being then a matter to be dealt with by technical knowledge and experience.

Realizing the fullest possible value from scrap material is unquestionably a very important factor in reducing the cost of production. The negligent methods frequently used in storing scrap, without regard to its use as a raw material in the plant, or for sale, are often responsible for inferior results from disposing of it. The possibility of using it in connection with by-products should be thoroughly investigated.

It is a function of a cost system to report quantities of each classification, of scrap material on hand, with the same degree of exactness as in the case of stores generally, and for precisely the same reasons. If this is done, the system will be instrumental in reducing

the production cost of material by increasing the values realized from scrap disposed of.

The cost of direct labor which enters into a product, is not of the same tangible nature as the direct material cost. Materials may be counted, measured, or weighed before they are put into process, and—within satisfactory limits—they may be accounted for by an inspection of the finished product. The direct labor which enters into the product is capable of being judged only from standard performance, or by constant supervision. Direct labor costs may be influenced to a considerable extent, by lost time,

age daily loss of 5 minutes per workman; simply because the loss is not definitely accounted for, it is therefore unknown.

The direct labor cost of production may be reduced through the instrumentality of an efficient cost system, by using accurately ascertained costs as a basis for replacing existing wage systems by systems which will stimulate workmen in the direction of improved and greater production.

As an element of cost, overhead expenditures are more difficult to govern than the other elements, for the reason that overhead is generally subject to a wider range of fluctuations. The

Daily Wage	Number of Workmen	1	20	30	50	100
\$3.00	Annual loss	\$8.34	\$166.80	\$250.20	\$417.00	\$834.00
\$4.00	Annual loss	11.12	222.40	333.60	556.00	1112.00

resulting from an insufficient supply of materials at the requisite points, or by department delays in carrying out schedules arranged for the continuity of progressive work upon the product, by two or more departments.

Losses from these causes, apparently negligible when confined to a single workman, reach an astonishing amount when they apply to a number.

The above tabulation, based upon an average loss of 5 minutes per day by each workman, 9 hours to the day, and 300 working days to the year, illustrates the opportunities which exist for reducing the direct labor cost of production, by means of a cost system which gathers lost time.

In a great many factories, which employ a considerable number of workmen, the direct labor cost of production bears a load much in excess of an aver-

question of reducing the production cost of overhead must be considered from the following natural divisions, which will be generally found to apply:

1. Fixed overhead.
2. Fluctuating overhead.

Any reductions which it may be possible to effect will therefore occur from the following:

3. Reducing the amount of the overhead.
4. Reducing the cost of the overhead by lowering its percentage.

Fixed overhead is generally represented by expenditures, (rent, salaries, etc.) which do not decrease or increase proportionately with volume of production.

Fluctuating overhead is generally represented by expenditures (indirect materials, supplies, loss from defective work, etc.) which, although influenced

by the volume of production, do not bear a definite relation to it.

In order that the fullest opportunity may be placed before all of the factory executives, for effecting reductions along the lines referred to, at 3 and 4 above, the cost department should conduct a cost system which will fully exhibit the requisite details in respect of the following:

An analysis of the charges so that the amounts of each similar class may be compared period by period.

The distribution made to each department, operation, or other subdivision.

The percentage relation of overhead to the production accomplished by each department, operation, or other subdivision.

The effect of increased production as a factor for reducing overhead cost.

The value of statistical statements which exhibit the details required by the foregoing, is shown by the follow-

ing tabulations which refer to a single department:

A tabulation somewhat similar to the foregoing, if promptly submitted at the close of each cost period, would enable foremen and factory executives to trace the causes of adverse variations. The results for February clearly show that, in comparison with the previous month, the volume of production decreased, and unit cost increased.

With respect to the increased cost of production for February, the various executives would require additional details, somewhat similar to the tables on page 810.

The increased unit cost, for February .00097 is now traceable, as follows:

In connection with similar charges . . . . .	.00462
Less-In connection with varying charges00365

Net increase, as above	<u>.00079</u>
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SUMMARY OF OVERHEAD

Department A—Year 1921

CHARGES	JANUARY	FEBRUARY	MARCH
Supervision	\$250.00	\$250.00	\$250.00
Indirect Material	40.00	25.00	30.00
Indirect Labor	175.00	115.00	135.00
Supplies	15.00	10.00	12.00
Rent	200.00	200.00	200.00
Insurance	15.00	15.00	15.00
Property Taxes	12.00	12.00	12.00
Light, Heat and Power	40.00	36.00	38.00
Depreciation	75.00	75.00	75.00
Repairs	30.00	30.00	30.00
Etc.,			
Totals	\$852.00	\$768.00	\$797.00
Units of Production	16,384	14,500	17,000
Unit Cost of Production . . . . .	.052	.05297	.0469

	SIMILAR CHARGES		UNIT COST	
	January	February	January	February
Supervision.....	\$250.00	\$250.00		
Rent.....	200.00	200.00		
Insurance.....	15.00	15.00		
Property Taxes.....	12.00	12.00		
Depreciation.....	75.00	75.00		
Repairs.....	30.00	30.00		
Totals.....	\$582.00	\$582.00	.03552	.04014

	VARYING CHARGES		UNIT COST	
	January	February	January	February
Indirect Materials.....	\$40.00	\$25.00	.00244	.00173
Indirect Labor.....	175.00	115.00	.01068	.00793
Supplies.....	15.00	10.00	.00092	.00069
Light, Heat, Power.....	40.00	36.00	.00244	.00248
Totals.....	\$270.00	\$186.00	.01648	.01283
Combined Totals.....	\$852.00	\$768.00	.05200	.05297

The variations shown by the unit costs unmistakably indicate the points to which criticism should be directed. The increased cost, undoubtedly, resulted from the decreased production, as shown by the comparative costs for the overhead items designated "similar charges."

Except as to Light, Heat and Power, the unit costs for February, in connection with "Varying Charges" are lower than for January, hence, if the January

costs were at or near standard the results for February are particularly satisfactory with the exception of decreased production.

If executives, foremen in particular, were instructed in the matter of reducing the overhead cost of production by increasing the volume of production, they would be stimulated to greater effort in accomplishing a greater volume. For instance, assume the following:

A plant, working to 60% of capacity, is turning out a production of 100,000 units

The direct material cost is	\$75,000.00
The direct labor cost is	25,000.00
The overhead cost is	5,000.00

If production were increased to 125,000 units
the amounts of the costs for material and labor would be proportionately increased; the overhead, however, would be unchanged.

If production were increased to 150,000 units
the costs are estimated as:

Direct Materials	\$105,000.00
Direct Labor	34,500.00
Overhead	5,550.00

The following tabulation would effectively present the details to executive attention.

The tabulation shows what is being currently accomplished, and it sets two distinct marks to be striven for in future accomplishment. Volume of production is often below what should be done by the fullest use of existing facilities, principally because the cost system is not used as a means for stimulating foremen, and other executives, by exhibiting the relations which exist between the costs of production and the volume of production. It must be borne in mind that a cost system which only reports occurring costs is

performing a part only of its functions. Information as to the costs which are actually occurring is, of course, valuable and very necessary, but the full significance of current costs cannot be grasped from a mere statement of their occurrence. Comparisons with the costs of previous periods, or with established standards, are necessary, and the system should provide for comparisons being made in each distinctive step in the productive process for which the costs are to be separately gathered. A cost system, properly operated upon these principles, will unflinchingly hold the cost of production at a minimum.

ITEMS OF COST	CURRENT PRODUCTION 100,000		PRODUCTION 125,000		PRODUCTION 150,000	
	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost
Direct Materials . . .	\$75,000.00	.75	\$93,750.00	.75	\$105,000.00	.70
Direct Labor	25,000.00	.25	31,250.00	.25	34,500.00	.23
Overhead	5,000.00	.05	5,000.00	.04	5,550.00	.037
	\$105,000.00	\$1.05	\$130,000.00	1.04	\$145,050.00	.967

THE EXPENSE BUDGETS

BY JAMES O. MCKINSEY *

IN the operation of a business it is necessary to incur numerous expenditures which, in accounting and business practise, are designated by the general term of "expenses." Expenses are incurred in connection with all the functional departments of a business. In the securing of sales, expenses are incurred for salaries of salesmen, wages of clerical help, postage, stationary, supplies, and advertising. In the production of goods, heat, light, power, supplies and miscellaneous labor must be purchased. In the maintenance of plant and equipment, repair and replacement costs must be secured. In the general administration of the business, expenses of various kinds are incurred.

Although these expenses are incurred in the main in small amounts, their total, in most businesses, is sufficiently large to absorb a large percentage of the returns from sales. Because they are incurred by all the departments of a business, are largely intangible in nature, and the individual items are small, their control is difficult. They have a tendency to increase constantly, and, as they increase, the profits of the business tend to decrease. To secure a control of expenses which is effective and yet not unduly burdensome is one of the most important and difficult tasks of business management.

From the viewpoint of administrative control, expenses may be classified:

1. Manufacturing expenses, or those which are incurred in the operation of the factory and the production of the commodity or service which is offered for sale.

2. Sales expenses, or those which are incurred in the marketing of the product produced or purchased for sale.

3. Financial expenses, or those incurred in planning and controlling the receipt, custody, and disbursement of funds.

4. Auxiliary expenses, or those incurred by the various auxiliary or service departments of the business, such as the accounting department, personnel department, purchasing department, and office manager's department.

5. Executive or administrative expenses, or those which are incurred in the general administration of the business and cannot be charged to any particular function of the business.

6. Corporate expenses, or those which are not incurred as a result of the operations of any particular department, but which are necessary for the operation of the business as a whole. Professional fees paid to attorneys and accountants, corporations taxes, and fees charged by a governmental body are illustrations.

The foregoing classification of expense should be seen easily if it is considered in connection with the typical chart of a manufacturing business shown in Exhibit A.

It will be understood, of course, that the chart of organization shown in Exhibit A is intended to be suggestive and not arbitrary. Scarcely any two businesses will have the same plan of organization. This is due to the differences in size, in volume, nature of operations, and in the nature of the personnel. In a mercantile business, the purchasing department will take the place of the production department shown in the illustration. In many businesses the general auditor, personnel manager, purchasing agent, and office manager report directly to the

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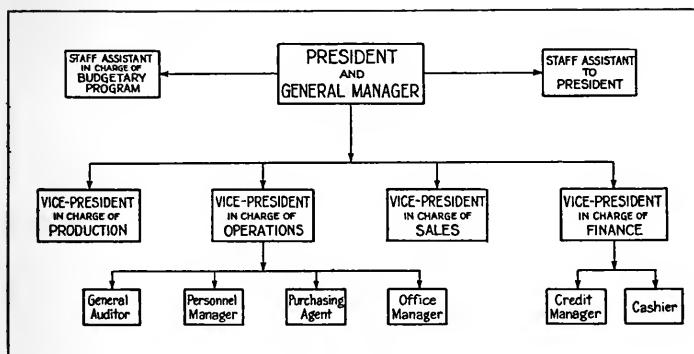


EXHIBIT A

president instead of reporting to a vice-president in charge of operations. The fact of particular significance for the present discussion is that the departments over which these executives exercise jurisdiction are "service" departments which are organized to further the operations of the major departments. The *corporate* expenses shown in the foregoing classification are incurred in the main in connection with the relations of the business with parties outside of the business organization, such as the state and national government, and merchandise and bank creditors. One of the primary purposes of the chart is to indicate the desirability of classifying expenses to correspond with the classification of administrative activities maintained by a business as shown by its chart of organization. The significance of this method of classification will be more apparent as the discussion proceeds.

There are some expenses which are incurred for the benefit of only one department and can be charged directly to that department. For instance, the salaries of the sales clerks can be connected directly with the operations of the sales department and charged to

sales expense. The repairs on factory equipment can be connected directly with the operations of the production department and charged to manufacturing expenses. There are other expenses which are incurred for the benefit of two or more departments and which cannot be charged directly to the expenses of any one department. For instance, the expenditures for light and heat are for the benefit of all the departments of the business. It is necessary, therefore, to allocate these expenditures to the various departments which are benefited by them. The first class of expenses is termed "direct expenses," and the second class is termed "indirect expenses."

The expenses which are here termed indirect expenses are referred to by various names by writers and practitioners. They are called "overhead," "burden," "non-productive" and other terms. The terminology of accounting and business management is not standardized. It is impossible, therefore, to use terms which have a uniform meaning and usage. The most that can be done is to define clearly those used and to limit their use to the definition given.

II

In most businesses the indirect expenses are of sufficient amount to make their allocation a matter of primary importance if a proper classification of expenses is to be maintained. Accountants and industrial engineers have given much thought to the problem of allocating indirect expenses. Two questions arise from a consideration of this problem:

1. What expenses should be allocated and to what departments?
2. On what basis should the allocation be made?

In answering the first question, it is necessary to consider the purpose for which the allocation is being made. Or, to carry the inquiry one step farther, it is necessary to know for what purpose the data with reference to expenses are to be used.

Most of the discussion of this question in the past has dealt with the allocation of manufacturing expenses to classes of product or to specific "jobs" or order lots. The purpose of this allocation is to obtain unit costs. The problem here is one of intradepartmental, rather than interdepartmental distribution. It is a question of distributing the total manufacturing expenses over the total product produced so that each unit of the product will bear its proportionate part of these expenses. There is some question as to what should be included under manufacturing expenses, but this is not a very acute one. Because of the attention given to factory costs within the past few years, and the necessity of deciding what elements are to be included in their determination, there has been developed a fairly uniform opinion as to what expenses should be classified as manufacturing expenses. Such items as interest on investment, are yet the subject of controversy.

Until recently, there has been little attempt to apply the principles of costs, as developed in connection with production, to the determination of selling or administrative costs. There has been much attention given to the unit cost to produce, but little attention given to the unit cost to market, or the unit cost of administration. There are certain inherent difficulties which make such unit costs difficult of correct determination, and, in some cases, there may be doubt as to their usefulness. As a consequence of the failure to develop "commercial" costs, there has been much less attention given to the classification of "commercial" or non-manufacturing expenses than has been given to the distinction between manufacturing and non-manufacturing expenses. Usually, the non-manufacturing expenses or commercial expenses which represent the difference between gross profit on sales and net profit are grouped under the two general classifications of "Selling" and "Administrative." All items which are not clearly sales expense are usually placed under administrative expense. In case of doubt with reference to any particular item, it is placed in the latter group which consequently comes to contain a great many items of a miscellaneous nature. Certain subclasses are maintained frequently under each of the major groups of Selling and Administrative, but since these subclasses are totaled on the financial reports, great care is not exercised in the allocating of expenses between them.

As a consequence of these practices, there has been a decided tendency to slight a consideration of the question of allocating indirect commercial expenses. When such allocation has been made, it has frequently been on an unscientific basis. Department stores and some few other businesses have broken away from the traditional

policy and given careful consideration to the allocation of these expenses, but such a practise has been the exception rather than the rule.

It can be seen, therefore, that the consideration of expense allocation has been confined largely to manufacturing expenses and has here been limited in the main to a consideration of their allocation as a basis for unit costs. Unit costs are useful and desirable, but in the desire to obtain these there has sometimes been a tendency to overlook one of the important purposes of cost statistics. It is not sufficient to know what costs *are*; in addition, it is necessary to control costs so they will be as low as possible. In the modern business organization, control is exercised through the individuals who compose the organization. If control of expenses is to be effected through members of the organization, it is necessary that they be classified so as to show the responsibility for each class. If responsibility is taken as the controlling factor in an expense classification, each department will be charged with that expense over which the executive head of the department exercises control. In addition, it may be charged with some items of expense, the amount of which is fixed or at least is beyond the control of any officer. The sales department, for instance, will be charged with the salaries of the employees of the sales department since these are under the direct control of the sales manager, and, in addition, it will be charged with the depreciation on delivery equipment, the estimated amount of which is determined in most cases by others than the sales manager. The depreciation should be treated as a sales expense for it is the direct result of the operations of the sales department and is necessary to the proper performance of the sales function. The sales manager could not affect its amount if

the duty of determining it was left to him, for its amount is determined by certain factors, such as the cost, scrap value, and estimated life. As an illustration of the type of expenses which it seems may better not be allocated to a department, the salaries of the president, general manager, and their staff may be mentioned. It is sometimes contended that the president supervises and directs all the departments of the business; therefore, his salary and that of his staff should be allocated to the departments. For instance, a portion of these expenses will be charged to sales expense. It seems that such a policy is unwise since such salaries are variable amounts, subject to the wishes of the board of directors and the president and are not directly or indirectly under the control of the sales department. If these salaries are increased, the sales expense will be increased and the sales manager is powerless to prevent it.

The author can recall one case in which the compensation of the sales manager is affected by the ratio of selling expense to sales. After the passage of the Income and Excess Profits Tax Law of 1917, the corporation increased the salaries of its executives. The corporation is a close one and the executives are the principal stockholders. Large salaries were thought to be better than large profits. The sales manager had put forth an unusual effort to increase his sales for the year 1918 with unexpected success. But when the increased salaries had been allocated to the departments, the sales expense was so increased that the bonus of the sales manager was smaller than the year previous, despite the unprecedented increase in sales. It is admitted that this is an extreme case, but it illustrates an important principle. If a department is charged with variable expenses over which its execu-

tive head has no control, the value of the departmental expense reports as a basis of administrative control is largely destroyed.

Expenses, like sales, production, and purchases can be adequately controlled only when estimates are made by the executives responsible for their incurrence, and these executives held responsible for the attainment of their estimates. Such a procedure is greatly weakened if executives are held responsible for expenses over which they do not exercise control. The first question asked with reference to expense allocation may be answered, then, by saying that no expense should be allocated to a department if such allocation will affect in a material way the fixing of responsibility for the expenses of the department on its executive head. There are, of course, cases where expediency will dictate a variation from the application of the general principle, but such variations should be permitted only for good reasons.

III

With reference to the basis of allocation, it is beyond the province of this discussion to enter into any detailed discussion of this question. Cost accountants have given much consideration to the allocation of manufacturing expenses to factory departments and manufacturing orders. The reader will find in the standard works on cost accounting able discussions of the various methods employed. Much less attention has been given to the proper basis for the allocation of commercial expenses although considerable has been done in this connection by department stores. The factory cost accountant in the early development of factory costs found the easiest method of distributing manufacturing expenses to be on the basis of direct

labor. In a similar manner, the mercantile cost accountant found the easiest method of distributing commercial expenses to be on the basis of sales. Consequently, sales has been used very extensively by department stores as a basis for allocating expenses to the various departments of the store. But the factory accountant has found that the distribution of expenses on the basis of labor often gives incorrect results, and the commercial cost accountant has found that the distribution of commercial expenses on the basis of sales may give results equally unsatisfactory. For instance, one of the largest items of expense to be allocated in a department store is advertising. Formerly, the usual method of allocating this to the various departments of the store was on the basis of sales. This has led to two undesirable results. First, some departments profit much more than others by the advertising, since it is devoted to the articles sold by some departments much more than to the articles sold by other departments. For instance, the advertising of ladies' ready-to-wear clothing will usually be much more extensive than the advertising of groceries. Yet, the sales of the grocery department may be larger than the sales of the ladies' ready-to-wear department; hence, it may be charged more for advertising. This gives inaccurate figures, and, if the departmental heads are paid a bonus on profits, it leads to an unfair charge against the profits of the head of the grocery department. Secondly, if advertising is distributed on the basis of sales each departmental head will try to secure as much advertising as possible, since he will feel that each of the other departments must pay part of its cost. This will result in his department's paying only a small part of the total. He naturally concludes that he must certainly get

more benefit from the advertising than it costs him; therefore, he will request and urge it. He will be the more apt to do this because he knows every other department is seeking advertising for which his department must pay its proportionate part. To be more concrete, the head of department A may be contemplating certain advertising of the articles which his department sells, which will cost \$500. If the entire \$500 was to be charged against his department, he might decide immediately not to request its expenditure. If, however, there are 10 departments and he knows that on the basis of sales only \$60 of the cost of the advertising will be charged against his department, he will feel that it must certainly be worth more than that to him so he will urge that it be done. The tendency, therefore, will be for the ratio of advertising to sales to increase constantly. Of course, a capable advertising manager or merchandise manager may check this tendency, but it will have to be guarded against constantly with a strong probability that the advertising will be larger as a result thereof.

The brief consideration given to the method of allocating indirect expenses affords the basis for the statement of the general principle that care should be exercised to allocate them in such a manner as to attain two results: (a) as near accuracy as possible; (b) the fixing of responsibility in such a manner that those responsible for the expense will desire to decrease and not to increase it.

The foregoing discussion has stated the general classifications or groups into which expense may be divided for purposes of administrative control, and the general principles which should govern the allocation of expenses between these groups. It is now necessary to discuss briefly the contents of each of these groups.

Consideration has been given to manufacturing expenses in the discussion of the production budget, so it is necessary to treat of these but briefly here. Under this heading are included all expenses incurred in the production of the commodity or service which is offered for sale. Usually, these are classified by departments, and sub-classifications are maintained for each department. Detailed departmental classifications are necessary as a basis for effective control. The departmental classification makes possible the fixing of responsibility, and the classification within the department makes possible the meeting of the responsibility. To illustrate concretely, the X Manufacturing Company has four departments and manufactures one commodity. In 1918 the unit cost of the commodity is \$12, while in 1919 it is \$18. In attempting to find the cause for the increase, the first analysis will be to determine how much of the total cost is material cost, how much is labor cost, and how much is manufacturing expense. This analysis shows that the manufacturing expense per unit was \$3 in 1918 and \$4 in 1919. An analysis of the cost of manufacturing expense by departments for the two years shows the following:

Year	Dept. A	Dept. B	Dept. C	Dept. D
1918	80	90	60	70
1919	120	95	75	110

This analysis shows that the principal increases in manufacturing expenses are in department A and department D. The responsibility for the increase is fixed on specific departments, but it is now necessary to determine whether the increase is due to

the inefficiency of the departmental heads or to causes over which they had no control. To ascertain this, it is necessary to examine the analysis provided by the departmental accounts. This examination may show that in departments A and D a large amount of miscellaneous supplies and indirect labor are necessary. Owing to the increase in the price of supplies and labor during the year of 1919, the manufacturing expenses of these departments have been increased. If it is shown that approximately the same *quantity* of supplies and labor are used as previously, but its price has greatly increased, the departmental foremen cannot be held responsible. If, on the other hand, it is found that the increase in manufacturing expense in these departments is due to the use of an increased *quantity* of supplies and labor, per unit of product, then there is circumstantial evidence of inefficiency on the part of the departmental foremen, and they should be required to show cause for the condition. This simple illustration serves to show the necessity for a detailed analysis of the expenses of each major group, if responsibility is to be fixed and variations explained.

IV

There is considerable difference of opinion among both accountants and business men as to what should be considered as sales expense. This is due in part to the fact that there are many items of expense which contribute more or less indirectly to the making of sales, and, since sales is the consummation of the process by which profit is made and funds brought into the business, it is quite natural to regard many activities as the by-product of sales, and the cost thereof as sales expense. The tendency to allocate the salaries of the general executives of the business to the

various departments including the sales department has been previously mentioned. Sometimes losses arising from uncollectible accounts receivable are treated as sales expense on the theory that such losses arise as a result of sales. In the same manner a part of the cost of maintaining the auxiliary departments, such as the personnel, purchasing, and accounting departments may be charged to the sales expense because it is contended that these departments render service to the sales department. Many other illustrations might be given, but the above are probably sufficient to indicate the problems which arise in trying to make a proper allocation of expenses as between sales expense and the other expense groups.

There is no desire on the part of the writer to attempt an arbitrary classification of expenses; in fact, it is the purpose of this discussion to emphasize the fact that an arbitrary classification is impractical and defeats its own purpose. If, however, responsibility is to be the primary test by which expenses are to be classified, it seems that all of the items of expense mentioned in the preceding paragraph should be excluded from sales expense. The reason for excluding the salaries of executives has been previously explained. Since the control of credits and collections is not vested in the sales manager, it seems improper to hold the sales department responsible for loss on bad debts. In the same manner, it seems desirable to exclude any part of the cost of maintaining the auxiliary departments since the expenses of these departments are controlled by their executive heads.

Sales expenses cannot usually be departmentalized in the manner suggested for manufacturing expenses. In case there are sales agencies or branches, the sales expenses may be classified to indicate the responsibility of each of these for this class of ex-

penses. In any case it is possible and desirable to divide the sales expenses into general classes or groups. A classification which is usually useful is the following:

1. Office expenses
2. Salesmen's salaries
3. Salesmen's expenses
4. Packing and shipping
5. Advertising

In most businesses there is a separate sales organization which necessitates a separate sales organization office with the attendant expenses incurred in its maintenance. Only the salaries of the sales executives and their clerical assistants should be included in this group. The question may arise with reference to the proper disposition of expenses incurred in the handling of incoming sales orders. If the clerical employees, responsible for the receipt, recording, and disposition of these orders, are under the control of the sales department, the expense of maintaining the order department should be treated as a sales expense. If, as in some cases, the order department is under the control of the production department, because this department desires to direct the handling of these orders, the expense of maintaining the order department should be treated as a manufacturing expense.

There is usually little difficulty in deciding as to the items which should be included under the heading of "Salesmen's Salaries," or deciding as to the proper method of recording these expenses. Problems may arise with reference to the proper method of compensating salesmen, but these are problems of sales management, rather than of accounting or budgetary control. The responsibility for this expense is vested solely in the sales department, and there can be little question with reference to its classification.

Salesmen's expenses are also without question an item of sales expense. The chief problem involved in their control is to check their inherent tendency to increase beyond reasonable limits, if some effective method of control is not exercised. This control can best be effected by a proper scrutiny of salesmen's reports and proper comparisons between sales expenses and sales obtained.

Not all the expenses of packing, or at least the placing of merchandise in containers, are to be treated as selling expenses. If the packing is that which goes directly on the goods, if it is necessary, in order to preserve them and to put them in a condition for selling, its cost should be charged against the cost of the goods. Examples are the jars which hold fruit, the boxes containing cigars, the paper wrappings on chocolate bars, and so forth. Such containers or wrappers are an integral part of the manufacturing cost and should be so treated in the accounts and the reports. The expense of packing goods for shipment should ordinarily be treated as a selling expense. So also may the cost of transporting the goods to the station for shipment be considered. In some cases, the same employees are used in connection with the unpacking of goods when received, and in packing them for shipment when they are sold. In such cases the expenses incurred in connection with both operations are usually charged to one account, and then allocated as between cost of goods sold and selling expense. In many cases the same transportation equipment is used to transport incoming and outgoing goods. In such cases total expenses are usually charged to one account and later allocated on some equitable basis, such as the ratio of purchases to the cost of goods sold. There is some difference of opinion as to the treatment of the

expenses incurred in shipping goods to the customer, if the transportation charges are paid by the vendor. It is sometimes argued that such expenses, which are usually called *freight out*, should be deducted from gross sales, since *freight in* is added to the purchases in determining the cost of goods sold. Such a procedure seems logical, and, if transportation charges are paid by the vendor on all or the major part of the goods sold, there is no objection to such treatment. If, however, as is usually true, the vendor pays such charges only in exceptional cases, in order to obtain certain orders, they are in the nature of selling expenses and should be so treated.

In connection with most business firms, advertising expense is a major item and its control is a problem of considerable importance. The value of advertising is undisputed, but the amount that can profitably be done is hard to determine. In most cases selling expense can be connected more or less directly with results, but with advertising this is usually more difficult. It is true that the success or failure of advertising as a whole can usually be determined, but the benefit derived from any particular advertising expenditure is difficult to judge. For this reason it is difficult to judge the success of the advertising department in terms of comparative statistics. Consequently control over advertising expense requires that careful estimates be made of the cost of contemplated advertising; that these estimates be carefully considered by the sales manager and other executives; that the necessary appropriations be made to meet the estimates which are approved; and that reports be made from time to time showing the actual expenditures so that appropriations be not exceeded. Business men have long realized the necessity for budgetary control of ad-

vertising and probably more progress has been made in budgeting this item of expense than any other. In some cases there is an advertising manager who is independent of the executive head of the sales department. But usually he is subordinate to the sales executive, and consequently advertising expense is shown as a part of sales expense.

V

The financial department of which the treasurer is the executive head incurs certain expenses in planning and executing the financial program. In many cases the credit and collection departments are under the control of the treasurer in which case the expenses of maintaining these departments will be treated as a financial expense. Financial expenses can usually be grouped under two major classes: (a) office expense; and (b) credit and collection expenses. The first will include the salary of the treasurer and his assistants and the cost of maintaining his office. The latter will include the cost of services and supplies of the credit and collections department. There has been a tendency in the past to place the cost of maintaining a financial department under the general heading of "Administrative" expenses. This tendency is probably due to the fact that the president in many small companies acts as treasurer. It seems that, regardless of whether there is a separately organized financial department, the financial function is of sufficient importance to merit the showing of its costs as a separate expense.

The expenses chargeable to each of the auxiliary departments, such as accounting, personnel, office manager, and purchasing, are those incurred in securing the services and supplies

which are necessary to the conduct of these departments. This will include not only the supplies which are purchased for the specific use of these departments, but also the proportional part of the cost of heat, light, and rent and other services which will be allocated to these departments. Sometimes the expense of maintaining these departments is allocated to the major departments of sales, production, and finance. From the viewpoint of budgetary control, it is desirable that the expenses of each of these departments be considered as a separate group in order that responsibility for this expense may be placed on the executive head of the department.

The executive expenses should include those which are incurred by the executives of the business who do not devote their services to any particular department, but render service to all the departments in the way of supervision and direction. This will include the salaries and cost of maintaining the office of the president and his staff assistants. Unless care is taken to exercise control over such expense, there is a tendency for it to increase unduly. One reason for this tendency is that the president of the company is usually vested with the final control of the expenditures incurred, and it is somewhat difficult for him to act as criterion of his own expenses.

"Corporate" expenses include those which must be incurred, not because of any functions which the corporation exercises, but because of its existence as a corporate organization and its relation, as such an organization, to governmental bodies and parties outside the organization. Such expenses comprise corporation fees, paid to the state government; capital stock taxes; directors' salaries and fees; expenses connected with the maintenance of stock registers and dividend payments; and

fees paid for professional counsel and assistance. The laws of most states impose on corporations certain obligations in the way of making reports, the maintenance of records, and the payment of fees. In the preparation of some of these reports, such as income tax returns, and also in the preparation of reports to creditors, it is necessary to obtain professional counsel from attorneys, accountants, and others. These costs are incurred not for the benefit of any particular department, but for the business as a whole. Therefore they had better be shown as a separate group. These expenses are often shown under the head of administrative expenses. This method does not seem desirable since the president should be held responsible for the amount of executive or administrative expenses, and he does not control the amount of the corporate expenses.

To provide an effective control of the expenses of the various departments, as well as to provide the necessary data for the financial budget, it is necessary that the following procedure be adopted:

1. That before the beginning of each budget period an estimate be prepared by the executive head of each department or unit showing the anticipated expenses of this department or unit for the next budget period and that this estimate be sent to the executive in charge of the budgetary program.

2. That these estimates be submitted by the executive in charge of the budgetary program to a central committee composed of the principal executives of the company or to the board of directors, and, after being revised by this committee or board of directors where deemed necessary, an appropriation be made to meet the expenses called for by each estimate.

3. That the amount of each appropriation, as determined by the central committee, or by the board of directors, be communicated to the executive responsible for the original estimate.

4. That a monthly report be made to a central committee or the board of directors through the executive in charge of the budgetary program showing the status of each appropriation.

5. That the original appropriation be not exceeded by any department without the permission of the central committee or the board of directors.

To insure the effective operation of the budgetary program, it is necessary that definite responsibility for the preparation and enforcement of the expense budgets be fixed. The estimate of manufacturing expenses will be prepared by the production department in the manner prescribed in the discussion of the production budget. The executive head of the sales department will be responsible for the estimate of sales expense. He will employ the services of his subordinates in its preparation. If sales are made through branches, each branch manager will be required to prepare an estimate of the sales expenses of his branch. If the central sales office is organized into sections, such as sales engineering section, orders section, claims section, and so forth, the head of each of these will be required to prepare an estimate of the expenses of his department. The advertising manager will be required to present an estimate of the anticipated cost of advertising. The head of the sales department will be responsible for combining all these estimates into a consolidated report to be submitted to the executive in charge of the budgetary program. The treasurer will be responsible for the preparation of the estimate of expenses for the financial department. He will require the preparation of estimates by the head of the credit and collections department and by the cashier, which he will use as a basis for the preparation of the estimate for the whole department.

The head of each of the auxiliary departments, such as the accounting, personnel, purchasing and office manager's departments will be responsible for the estimate of his department. He may employ assistants in the preparation at his discretion, but the responsibility for its preparation will rest upon him. The president is responsible for the preparation of the estimate of executive expenses. This duty he probably will delegate to his staff assistant, and this assistant may employ the aid of the other executives in the office of the president. The estimate of corporate expenses will be prepared by the official designated by the president. This estimate may be prepared by the secretary of the corporation since he is conversant with the relations which give rise to these expenses. In some cases this estimate is prepared by the treasurer, but, if this practise is followed, care must be exercised to keep the estimate entirely separate and distinct from the estimate of expenses for the financial department.

The work of the executives who are responsible for the consideration of the departmental estimates is greatly facilitated if these estimates are presented in a form which shows comparisons between the estimates and past expenses. Usually, it is desirable that the form provide at least the information called for the following columnar headings:

1. Expense class
2. Amount same period last year
3. Average for last 4 budget periods preceding the one during which the budget is prepared
4. Estimated for this period
5. Distribution
 - (a) First month
 - (b) Second
 - (c) Third month, etc.,

By a consideration of the estimates when submitted in this form, the executives can see whether an increase of

expenditures are called for, and, if so, can investigate to see if this increase is justified. The estimates as submitted by the various departments will show the salaries to be paid to the employees of these departments and will show the amount of supplies to be consumed during the budget period. The supplies used by all the departments of the business are usually purchased by a central purchasing department. The purchasing agent purchases these in the quantities which he thinks are most economical, and consequently there may be at any time a considerable inventory of supplies on hand. The supplies consumed during any period, therefore, will not correspond with the supplies purchased in that period.

After the departmental estimates are made, it is necessary that these be sent to the purchasing agent, and, on the basis of the estimated consumption by the various departments, he will estimate the purchases which must be made, and taking into consideration the terms on which these will be secured, will determine the disbursements for supplies for each period. The estimated disbursements are necessary as a basis for the preparation of the financial budget.

To effect a proper control of the appropriations made for each department, it is necessary to have prepared monthly a report which will show for each department a comparison between the expenditures of the department to date and the appropriation for expenses for the department. Usually, the accounting department prepares a report showing the actual expenditures of each department, and the executive in charge of the budgetary program prepares the report showing a comparison of the expenditures with the appropriation. A difficulty which may arise from this method is the failure of the accounting department to prepare

the monthly report in sufficient time to provide for a current check upon the monthly expenditures of the departments. To be of service the central committee should receive these comparative reports shortly after the end of the month. If undue delay is caused by depending on the accounting department, it may be necessary to have each department keep a special record of its expenditures and report these at the end of the month to the executive in charge of the budgetary program.

In the preceding pages the procedure necessary for the preparation and execution of the expense budgets has been outlined. In summary form the procedure is as follows:

I. Classification of Expenses

(a) The setting up of an expense classification which corresponds to the classification of activities maintained by the business as shown by its chart of organization.

(b) The allocation of indirect expenses in such a manner as to indicate the responsibility for their incurrence.

(c) The establishment of subclassifications under the major classes which will enable the definite fixing of responsibility and a comprehensive explanation of variations.

II. Preparation of Budgets

(a) The preparation of an estimate of the expenses of each department for each budget period by the executive heads of the department.

(b) The transmission of this estimate to a central committee or the board of directors for consideration and approval.

(c) The making of an appropriation by the central committee or the board of directors to meet the estimate as approved.

III. Control of Budgets

(a) The preparation of a monthly report showing a comparison between the actual and estimated expenditures.

(b) The consideration of this report by the central committee or the board of directors and the making of such revisions in the original appropriations as may be found necessary.

PROBLEMS FOR THE BUSINESS EXECUTIVE

ACCOUNTING PROBLEMS

BY HAROLD DUDLEY GREELEY*

IN the April issue of *Administration* certain suggestions were made concerning accounting terminology and accounting procedures which are the subject of differences of opinion among accountants of standing. In that connection the hope was expressed that these suggestions might induce correspondence from readers, raising other points for discussion, so that this department might become somewhat of a forum. This seemed to meet with ready response from readers, because since the publication of that issue many letters have been received requesting discussions on specific questions which readers had before them for decision. Some of these are discussed in the present issue.

One of the questions asked was whether a cash shortage should appear on a statement of profit and loss as a profit and loss charge, or, on the other hand, whether a cash overage should appear on such a statement under a caption of profit and loss credit. It is assumed that the cash shortage or the amount by which the actual cash exceeded the sum which should be on hand resulted from an error by the cashier in handling cash transactions. It is assumed also that there is no possibility of recovering the amount of the cash shortage from persons to whom excess payments may have been made, or, on the other hand, that there is no way of identifying persons to whom short payments may have been made. Under these circumstances the cashier ordinarily would not be obliged to make good the shortage, or on the other hand, would not be allowed to keep any excess cash on hand. This, of course, is a different case from that in which the cashier makes an error in depositing more or less than the amount called for by the cash receipts side of the cash book. The latter case is a situation

which could immediately be discovered and easily corrected. The one under discussion concerns the almost inevitable discrepancies in cash which result from numerous cash transactions during a busy day.

In practice, where these differences do not amount to substantial sums, probably the usual procedure is to debit or credit the item, as the case may require, to some such account as general expense. This procedure, of course, is indefensible from the viewpoint of logical accounting. The increase or decrease resulting in the cash has no connection with the general expense of running the business, and furthermore, by adjusting the general expense account the cash overage or shortage is taken into the operating result of the business. If it is to be shown at all on the profit and loss statement, it should appear as a profit and loss charge or profit and loss credit.

In most cases it is desirable to show the fact in a separate account under such a caption as "Cash Short or Over." Only in this way can the facts clearly be shown and the efficiency of the cashier checked. If items continue regularly to appear in this separate account, it becomes evident either that the cashier is not efficient or that the system under which he operates needs to be remedied. Another reason for recording these facts in a separate account is that they do not result in any way from the operation of the business. In strict accuracy the balance of this account is a capital loss or a capital gain, and it should be debited or credited, as the case may require, to surplus if in a corporation, or to capital if in a partnership or a sole proprietorship. The discrepancy in the cash is not intentional. It is not an expense incurred in managing the business or in securing outside income, nor is it an income earned by the business or by any investment made by the proprietors of the business. A cash shortage is quite like a fire

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loss or any other casualty not compensated for by insurance. Consequently it would seem that it should not appear at all in the profit and loss account but should appear only in a statement of surplus or capital adjustments. It should be noted, however, that accounting for it in this way would not have any effect upon its taxability as income or upon its allowability as a deduction.

Another question proposed was the following: "Occasionally one sees an industrial plant with flower boxes on the window sills and surrounded by a fine lawn interspersed with beds of flowers. Which accounts are affected by this service to the aesthetic sense?" Dividing all the expenses which lead to the net profit from operations into three classes, namely, manufacturing, selling and general administrative, it is obvious that we may eliminate at once the selling expense group. As the plant under discussion is an industrial one, it may be assumed that no sales are made there. It is difficult to lay down a general rule because in each case all circumstances must be considered; but it would seem that expenses of the character named might properly be included under a separate heading among the manufacturing overhead expenses. They are really in the same class as expenses for washing windows and cleaning corridors, because they tend to make the building attractive for the workers who are employed in it, and thus to increase their efficiency. It will be generally admitted that poorly kept and unattractive surroundings induce poor work, and on the other hand, that well-kept and attractive surroundings tend toward happiness and contentment on the part of the workers, and thus lead indirectly to a better quality and a greater quantity of work. This being so, it would be fair to include such items under manufacturing overhead; but, of course, the total cost involved in them should be shown in a separate subaccount, so that such costs will not be confused with other items of manufacturing overhead, such as the cost of oil and waste and supervision and the like.

A somewhat similar question concerns the expense of light for purposes other than display, for heat, for cleaning, for internal stationery, and other expenses in a sales

department which in nowise directly influence or induce sales. It was argued that these should not be considered selling expenses because they are not directly connected with the volume of sales. The argument that these expenses do not affect sales seems to beg the question. One of the factors having the greatest influence on sales is the service rendered to customers by the sales department. Orders from customers must be recorded, reported, and passed on to other departments for filling. Individual salesmen on the road or working at any point away from the office cannot satisfactorily attend to these details with the promptness required by modern customers. Consequently, there must be some general sales department office in which the necessary clerical work can be carried on. If this is so, the expenses of such an office are sales department expenses and constitute a part of the cost of selling the product. The expenses of a sales department office do not differ materially from those of any other office, and they most certainly include such expenditures as those for light and stationery. Consequently, it is felt that expenses such as those itemized in the question may with perfect propriety be listed as selling expenses.

Many industrial plants find it good business to provide recreational and educational facilities for employees, and a question has been asked whether or not the expense of such activities should be regarded as a manufacturing expense. On the assumption that these expenses are solely for employees in the plant itself, they should be regarded as departmental expenses constituting part of the manufacturing overhead of the department in which they are incurred, because they are considered by the management necessary to secure the highest degree of co-operation from the workers turning out the product.

One reader has asked for the proper allocation of the expense for doctors, medicine, and nurses, and for compensation for accidents. If the industry is one in which accidents are frequent, experience will show the average amount of expense on account of accident compensation likely to be incurred each year. The amount of this expense may properly be considered a part

of the manufacturing overhead, to which it should be charged currently with a corresponding credit to a reserve for accidents against which compensation actually paid should be charged. If, however, accidents are of rare occurrence, it would seem entirely proper to charge them as unusual losses under such a caption as a profit and loss debit. The expenses for doctors, medicine, and nurses, seem to be in the same category with those for general welfare work and should be charged to manufacturing overhead. In other words, these expenses are necessarily incurred in the effective handling of manufacturing labor, and for that reason they constitute manufacturing expenses of an overhead or general nature.

In the May issue an illustrative form of statement of income and profit and loss was shown in order to serve as a basis for a discussion of certain principles or rules of presentation. Reference to that issue will show what is usually the conventional form of income and profit and loss statement. In the present issue there is shown a some-

what unusual form in which averages form an integral part of the statement, and yet they are calculated on three different bases.

Ordinarily in a statement of income and profit and loss all averages are on the basis of units sold, just as percentages are based on the amount of net sales. In the present statement the variation in the bases of the averages is due to the inclusion in the statement of the figures concerning the cost of goods manufactured. Ordinarily the cost of goods manufactured is shown in a supporting schedule, only the net amount being brought into the statement of profit and loss. This is generally the best procedure because the number of units manufactured seldom, if ever, equals the number of units sold, and consequently there is not generally any way of applying average figures or percentages to the elements composing the cost of goods manufactured.

The following statement shows one case in which it is possible to use average figures in a statement combining the cost of goods manufactured with the sales:

CONDENSED STATEMENT OF PROFIT AND LOSS
FOR THE YEAR ENDED DECEMBER 31, 1920

	<i>Number of Bags</i>		<i>Average per Bag</i>
SALES.....	58,737	\$46,985.19	\$.80
COST OF GOODS SOLD:			
Prime Cost of Product Manufactured.....	56,358	\$24,558.23	\$.44
Manufacturing Overhead.....	56,358	6,040.03	.11
Total Manufacturing Cost.....	56,358	\$30,598.26	\$.55
Packing Expense.....	58,686	5,526.74	.09
Total.....		\$36,125.00	
Add—Decrease in Inventories.....		1,313.04	-
Total.....	58,737	37,438.04	\$.64
GROSS PROFIT ON SALES.....	58,737	\$ 9,547.15	\$.16
SELLING EXPENSE.....	58,737	5,333.46	.09
NET PROFIT ON SALES.....	58,737	\$ 4,213.69	\$.07
ADMINISTRATIVE EXPENSE.....	58,737	1,389.41	.02
NET PROFIT FOR THE PERIOD.....	58,737	\$ 2,824.28	\$.05

SUMMARY OF INVENTORIES

	<i>Product Unpacked</i>	<i>Product Packed</i>
Inventory Jan. 1, 1920	4,965 bags	96 bags
Inventory Dec. 13, 1920	2,637 "	45 "
Decrease	<u>2,328</u> "	<u>51</u> "

CALCULATION OF BAGS MANUFACTURED

Number of bags sold		58,737
Decrease in Product Unpacked	2,328	
Decrease in Product Packed	51	2,379
Number of bags manufactured		<u>56,358</u>

COST VALUE OF DECREASE IN INVENTORY

Decrease in Product Unpacked	2,328 bags @ \$.55	\$1,280.40
Decrease in Product Packed	51 bags @ .64	32.64
Cost Value of total decrease		<u>\$1,313.04</u>

It will be noted that all of the final figures on the above statement are divided by the number of bags sold in order to get the average per bag, but the details of the calculation of the cost of goods sold are divided by the number of bags manufactured or by the number of bags packed, as the case may require.

The first factor needed in the preparation of this statement is the number of bags manufactured. In the industry from which this statement was taken there is no way of measuring production except by comparing inventories and taking into account the number of bags sold. Consequently, it is necessary first to determine the changes in inventories. Sales of the product in question are made from packed bags only, unpacked product being stored in bins the contents of which are estimated in terms of bags, the calculation being made from the cubic contents of the bins. The product is packed in bags only as it is needed for sale, except, of course, that a small quantity of packed bags will always remain on hand. The cost of packing is chiefly labor, but it includes the cost of the bags themselves and certain small quantities of supplies.

In the illustrative statement a reduction or decrease appears in the inventories of the product. By subtracting the number of bags of this decrease from the number of bags sold the number of bags manufac-

tured can be determined. Dividing the total manufacturing cost by the number of bags manufactured gives an average of \$.55 per bag for manufacturing cost.

Having determined the cost of packing, it becomes necessary to ascertain the number of bags packed in order to get the cost of the average packing per bag. Since the product is sold in packed bags only, the number of bags actually packed during the period under review can be ascertained by subtracting from the number of bags sold the decrease in the inventory of bags packed on hand at the end of the year as compared with the inventory on hand at the beginning. Dividing the cost of packing by the number of bags packed ascertained in this way gives an average cost of packing of \$.09.

Since the manufacturing cost is \$.55 and the packing cost is \$.09, it is obvious that the cost of the bag ready for sale is \$.64. Multiplying the total number of bags sold by the average cost of \$.64, gives the total cost of goods sold as it appears on the above statement. It will be found that the total cost of goods sold ascertained in this way agrees with the cost of goods sold ascertained by adding to the manufacturing cost the cost of goods withdrawn from the inventory during the year. In order to determine the latter figure, however, it is necessary to apply to the number of bags by which the

inventory has decreased the proper average cost per bag.

The summary of inventories shows that the inventory of the product unpacked has decreased 2,328 bags. Since the statement shows that the cost of the product unpacked is \$.55, the total value of the decrease in the inventory of the product unpacked is accordingly \$1,280.40. The decrease in the inventory of the product packed was 51 bags. Since the cost of the product packed and ready for sale is \$.64, the value in cost prices of the decrease in the product packed is 51 times \$.64 or \$32.64. Accordingly, the total cost value of the decrease in inventory is \$1,313.04. By reference to the statement it will be seen

that the addition of this amount to the cost of goods manufactured gives a total cost of goods sold of \$37,438.04, which is the same figure ascertained by multiplying the number of bags sold by the average cost of a bag ready for sale.

The above form of statement will be useful when the product manufactured is of such a character that the averages per unit can be ascertained. Where the form can be used it will be found convenient in that it gives on one statement the average cost of manufacturing as well as the averages based on sales figures. This form should not be used, however, unless the product is of a uniform nature so that averages can fairly be used.¹

A PROBLEM IN CORPORATE FINANCING

BY ARTHUR S. DEWING*

THE Sunboro and Eastern Pennsylvania Railroad passed into the hands of receivers on August 10, 1914. The road had been suffering from a combination of maladias for a period of over seven years. During this time the gross earnings had risen from \$7,614,000 to \$12,143,000, while the operating expenses had risen from \$5,396,000 to \$11,134,000. The experience of these seven years may be seen at a glance from the accompanying tables.

At the time of the failure, August 10, 1914, there were outstanding the following funded liabilities:

1. Sunboro and Harrisfield first mortgage 7's. Issued 1880, due in 1910 and extended at 5% to 1960. A first mortgage on the main line extending between the two terminals of the railroad, 264 miles. \$6,738,000 outstanding. Mortgage closed.

2. Sunboro and Harrisfield, second mortgage, 6's. Issued in 1885, due in 1945. \$1,816,000 outstanding and mortgage closed. Secured by the same property as the first mortgage 7's but junior to it.

3. Dobbinsville Division. 1st 6's. Issued in 1891, due in 1921. A first mortgage on the branch line from Mason Junction to Hartford's,

68 miles. \$710,000 outstanding. Mortgage closed. This branch reaches important coal properties, and originates about 69% of the coal traffic of the road. The total coal traffic represents about 53% of ton miles handled by road.

4. Sunboro and Eastern Pennsylvania Railroad first mortgage 5% gold bonds. Issued in 1898 and due in 1938. A lien on 687 miles of line subject to the two preceding issues on the main line and to the Dobbinsville divisional bonds. \$5,750,000 outstanding. Mortgage closed.

5. Sunboro and Eastern Pennsylvania Railroad general mortgage 5% bonds. Secured by the same property as the preceding (first mortgage 5's) but subject thereto. \$10,000,000 authorized, \$2,685,000 outstanding. Issued in 1903 and due in 1953.

6. Debentures. \$2,000,000 6's. Issued in 1912, due in 1922.

¹ Readers who refer to the May issue for the statement of income and profit and loss shown there as a sample form are cautioned to disregard an obvious error in printing on the schedule 1 showing the cost of goods sold. In the comments following the statement certain references are made to rules of typography whereby certain items should be capitalized in order to emphasize their significance. It is embarrassing, therefore, to find an error in printing in capitalizing the caption "manufacturing overhead." It is obvious that this should not be capitalized any more than the captions for material cost and for direct labor. The only captions in schedule 1 which should be capitalized are the cost of goods manufactured, the increase in finished goods inventory, and the cost of goods sold.

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YEAR ENDING JUNE 30

(000 omitted)

	1908	1909	1910	1911	1912	1913	1914
Gross Earnings	7,614,	8,713,	9,112,	11,318,	10,792,	11,516,	12,143,
Maintenance	2,403,	2,617,	2,319,	2,732,	3,019,	2,991,	2,711,
Other Operating Expenses, in- cluding Taxes	2,993,	3,380,	4,176,	6,515,	6,007,	7,166,	8,423,
Total Operating Expenses	5,396,	5,997,	6,495,	9,247,	9,028,	10,157,	11,134,
Net	2,218,	2,716,	2,617,	2,071,	1,764,	1,359,	1,009,
Interest Charges	1,015,	1,015,	1,015,	910,	970,	1,030,	1,030,
Operating Ratio	71%	69%	72%	82%	84%	88%	92%

7. There were outstanding \$1,260,000 of 4% equipment obligations. The amount was originally \$1,800,000 issued in 1911 to purchase approximately \$2,000,000 of steel coal cars. The contract, issued under the Philadelphia plan, the Ferrard Trust Company, owner and lessor, called for annual instalment payments of \$180,000. These had been met regularly. The interest on the outstanding certificates had been regularly charged to operating expenses.

In addition the company had the following obligations outstanding:

Merchandise debts contracted before February 10, 1914, \$773,000.

Current merchandise debts contracted since February 10, 1914, \$216,000.

Current pay-roll, salary and other labor charges, \$69,000.

Bank loans maturing before September 1, 1914, \$100,000.

Bank loans maturing before January 1, 1915, \$60,000.

Bank loans maturing after January 1, 1915, none.

The stock issues were represented by \$5,000,000 6% non-cumulative preferred and \$5,000,000 common stock.

On August 25, 1914, the receiver obtained permission to issue \$500,000 par value 2 year 6% receivers certificates, ranking, prior to the Sunboro and Eastern Pennsylvania general mortgage bonds. These were sold for 98 to banks and the proceeds used to pay the current merchandise bills of \$216,000 and the unpaid pay-roll of \$69,000. The remainder was expended

during the next eight months in repairs, betterments, and general improvements.

Another issue of \$180,000 was made in February, 1915, in order to meet the annual instalment on the equipment trust obligations.

The receivers report for the year ending June, 1915, showed the following:

Gross Earnings	\$11,978,000
Maintenance	5,112,000
Other Operating Expenses Includ- ing Taxes	6,224,000
Net Earnings	642,000

The receiver admitted in his report to the general reorganization committee that at least 35% of the maintenance charges were extraordinary, due to the previous protracted period of under-maintenance.

It was also clear that the falling off of gross earnings was due to the depression consequent upon the Great War. During the six months of the year from June 30 to December 31, 1914, the gross earnings had been approximately \$4,800,000, in comparison with approximately \$7,100,000 for the last six months of the fiscal year. The receiver reported that, because of previous liberal charges to maintenance, he was able to show a net operating ratio for the four months from May 1, 1915 to August 31, 1915 of 7% below that of the fiscal year ending June 30, 1914.

In September 1915, the General Reorganization Committee prepared a plan of reorganization. What plan would you suggest?

GENERAL COMMENT AND SOLUTION

PAST HISTORY

From an inspection of the earnings and statements of the Sunboro and Eastern Pennsylvania Railroad from 1908 to 1914 three things are obvious:

1. The road has not obtained a normal increase in gross earnings. The year ending June 30, 1908 was a year of depressed railroad earnings following the monetary panic of the autumn of 1907. The steady increase in gross earnings from 1908 through 1911 is therefore readily understandable, perfectly normal, and not indicative of either remarkable prosperity or able management. But from 1911 through 1914 the gross earnings were stationary. The railroad, operating in the thickly settled sections of the eastern states, should have shown a steady and uninterrupted increase in gross earnings. The fair presumption, therefore, is that the road by

paratively in the up-keep of the road. Had the same relative proportion of gross earnings been expended in 1914 for maintenance as in 1908, the 1914 maintenance charges would have been over \$3,880,000 and the total operating costs would have exceeded the gross earnings.

Clearly then the reorganization must be a drastic one. It must provide at least \$680,000 in money with which to pay off the receivers certificates and should provide, in addition, some money to improve further the physical condition of the road. It would be well, also, to secure the money requisite to meet the instalment due in February, 1916, on the equipment certificates. Some, at least, of the expenses of the reorganization would have to be met

	1908	1911	1914
Total Gross	\$7,614, 000	\$11,318,000	\$12,143,000
Total Maintenance	2,403,000	2,732,000	2,711,000
Total Operating Expenses	5,396,000	9,247,000	11,134,000
Percentage of Maintenance to Gross	32%	24%	22%
Percentage of Maintenance to Total Operating Expenses	45%	30%	25%

reason of inefficient management, was losing business to its competitors.

2. The total operating expenses and operating ratio have both increased relatively and absolutely. In 1908 the total operating expenses were \$5,400,000 out of a total gross of \$7,600,000 or a ratio of 71%. This ratio remained relatively constant for the next three years; it then rose steadily so that in 1914 the total operating expenses absorbed 92% of the total gross earnings. Obviously, the increase in cost of operation was all out of proportion to the increase in gross earnings. Should the same relative increases continue, the costs of operation would presently exceed the total receipts of the road.

3. Although the total operating expenses have increased relatively and absolutely, the maintenance component of the operating expenses has decreased. This is easily observable from a few comparisons.

Clearly, and without question, the management had been spending much less com-

in money. Altogether \$1,000,000 in money should be secured.

The second requisite of any reorganization plan would be a reduction in the fixed charges. According to the statements of the company, the railroad had succeeded in earning its fixed charges during all the years except the one immediately preceding the receivership. Yet, by analyzing the decrease—absolute and relative—of the maintenance charges, it is obvious that this apparent solvency was due to marked failure to maintain adequately the physical condition of the road.

During the year of receivership, when the charges to maintenance were clearly and admittedly over-liberal, the purpose of the receivership being to make up for the delinquencies of the past, the road showed net earnings of \$640,000. The interest charges

on the two underlying main line bond issues required \$445,860. It is obvious, therefore, that these two issues cannot be disturbed, or if they are disturbed new securities equal in value and attractiveness must be given to the old holders. The balance of earnings over these underlying charges is about \$200,000. The interest on the Dobbinsville branch bonds amounts to \$42,600. This branch is very important to the present organization of the Sunboro and Eastern Pennsylvania Railroad. The operating and financial structure of the road had been, during the preceding four or five years, recast so as to accommodate a large coal traffic. A very large proportion of this traffic originated on the Dobbinsville branch. It would be, therefore, a very serious mistake to jeopardize the ownership or control of this branch as a result of an attempt to disturb the small issue of \$710,000 first mortgage bonds, with interest charges of only \$42,600.

The two underlying main line, and the Dobbinsville branch bonds absorb \$488,000 of the \$640,000 available earnings. This would leave earnings of only about \$150,000 with which to meet the interest on the Sunboro and Eastern first mortgage 5's. This interest amounted to over \$280,000. On this showing it is obvious that all the junior mortgage and debenture bondholders must be prepared to endure some sacrifice, both in lien on income and on the "corpus" or property of the road.

Furthermore, the money required by the reorganization, \$1,000,000 in cash, must be obtained from the junior security holders, presumably the stockholders. So that the crux of the problem of the reorganization becomes a kind of "give and take" between the junior bondholders and the stockholders.

One of two plans might be adopted. Either all the security holders, including the owners of the underlying bonds, might agree to a thorough and comprehensive reorganization in which an entirely new and much simplified financial structure would be created out of the old one, or the underlying bonds might be allowed to remain as they are and the junior securities only be disturbed. The former alternative would require the consent and active co-op-

eration of the senior bondholders—and therefore more difficult to execute—but it would at the same time produce a more permanent and stable financial structure. The second alternative would be quicker, easier, and less expensive to execute; it would, however, merely ameliorate the present distress without effecting a thorough and abiding cure. The decision would, in the end, rest with the senior bondholders. If they were well organized and showed a willingness to co-operate, it would be wise financial policy to effect a general reorganization involving the refunding of all the securities; if they were scattered, unorganized, and showed little interest in the fortunes of the road, it would be foolish to do more than merely fund the current debt and reduce the fixed charges of the junior bonds.

We will assume, for purposes of argument and discussion, that all parties concerned realize that a comprehensive reorganization is expedient and that it can be consummated with the active co-operation of the senior bondholders.

First mortgage 5% bonds, new securities to be created, a first and only lien on the entire mileage and equipment of the Sunboro and Eastern Pennsylvania Railway, subject only to the lien of the equipment certificates on certain of the rolling stock. Due in 1960. Authorized \$20,000,000. Issued \$11,564,000. The unauthorized balance to be issued only for the actual cash cost of improvements and then only when the net earnings are twice the interest charges on the entire outstanding first mortgage bonds, issued and to be issued.

Preferred stock 6% non-cumulative. Protected by a provision which prevents the further issue of preferred stock without the consent of 75% of the outstanding preferred stock. Authorized and issued \$10,797,900.

Common stock. Authorized and issued \$10,846,500. Exchange of the old securities into the new securities to be effected on the accompanying basis.

From what has been said already the two underlying mortgage liens of the Sunboro and Harrisfield must be fully protected. In the plan just outlined the two bond issues are given the same consid-

OLD SECURITY	AMOUNT	ASSESSMENT TO BE PAID		NEW SECURITIES				COMMON STOCK	
				FIRST MORT- GAGE BONDS		PREFERRED STOCK			
		%	AMOUNT	%	AMOUNT	%	AMOUNT	%	AMOUNT
S. and H. 1st	\$6,738,000	..	.....	100	\$6,738,000	10	\$673,800	..	.....
S. and H. 2nd	1,816,000	..	.....	100	1,816,000	10	181,600	..	.....
Dobbinsville	710,000	..	.....	100	710,000	..	.....	10	\$71,000
S. and E. 1st	5,750,000	..	.....	40	2,300,000	80	4,600,000	..	.....
S. and E. Gen	2,685,000	..	.....	..	.....	50	1,342,500	50	1,342,500
Debentures	2,000,000	..	.....	..	.....	..	.....	100	2,000,000
Old Debts	773,000	..	.....	..	.....	..	.....	100	773,000
Bank Loans	160,000	..	.....	..	.....	..	.....	100	160,000
Preferred Stock . .	5,000,000	10	\$500,000	..	.....	70	3,500,000	30	1,500,000
Common Stock . . .	5,000,000	10	500,000	..	.....	10	500,000	100	5,000,000
Totals	30,632,000		1,000,000		11,564,000	10	797,900		10,846,500

eration. This is just. The 5's represent a closed prior lien on the whole property. They are given a bonus of 10% in the new preferred stock as an inducement to accept bonds issued under a new open general mortgage covering the entire property. The new bonds will be more easily marketable than the old bonds, but not as secure. The fixed interest return will be the same, but in addition—through the bonus of preferred stock—the holders are given an opportunity to share in the future prosperity of the road. If the road continues a failure the new bonds will not, probably, command a market below the old bonds; if it is a success the market value of the new bonds together with the preferred stock bonus will be greater than that of the old bonds. The holders will have, therefore, something to gain, and nothing to lose by the exchange. And the same policy is pursued regarding the second mortgage 6's. They represent a small second closed lien on the main line, so that their security is a little less—but only a little less—than the first mortgage 5's. The slightly less security is fully compensated for by the one per cent greater income return. For purposes of exchange therefore the two issues are regarded as of the same intrinsic value.

The Dobbinsville branch bonds occupy

a very strong strategic position in the whole financial structure. As organized, the loss of the branch would do great injury to the road; and the bondholders, were they allowed to foreclose and take the property for themselves, could easily make a satisfactory operating or traffic agreement with some other road, owing to the large volume of coal carriage which originates on their line. On the other hand the bonds represent a small, practically unmarketable issue. Under any circumstances they would be poor collateral at the banks. They mature in five years, so that the holder, in exchanging them for new 5% bonds would lose at most 1% a year or 5% in all. Considering that the security of the new first 5's, covering the entire road, is equal to that of these branch line bonds, while the former have greater marketability, we may properly assume that a bonus of 10% of new common stock fully compensates for a loss of 1% in income for a period of five years.

By reference to the earnings of the road under the receiver it is obvious that interest charges on the \$5,750,000 Sunboro and Eastern first 5's were not earned. (Earnings available after charges on the underlying bond issues, even 000, \$152,000, interest on the first 5's \$287,000.)

Yet the receiver admits that 35% of the maintenance charges, or \$1,789,000, were abnormal. If even a small proportion of these maintenance charges had been capitalized the interest of the Sunboro and Eastern first 5's would have been fully earned. Reasonable precaution dictates, therefore, that part of the charges on this issue shall be made contingent, yet the bondholders would feel, justly perhaps, that they should not be called upon to make any real sacrifice. This predicament would be settled by giving these bondholders new bonds carrying fixed charges of \$115,000 (40% of new first 5's or \$20 for each \$1000 old bond—2%) or nearly the balance of earnings available under the receiver's earning statement, together with a very liberal bonus of new preferred stock. They would, therefore, be in a position to receive the full available earnings if the road made no improvement, but if the earnings were liberal they would receive an additional contingent income of \$276,000 (80% of new preferred stock or \$48 for each \$1000 old bond—4.8%). This, with the fixed income, would give them 6.8% instead of 5%. In other words, they endure a reduction in fixed income, but are compensated by an increase in fixed and contingent income.

The efforts to meet the interest charges on the general mortgage 5's and the debentures precipitated the failure. The only way of safeguarding the reorganized road from a reoccurrence of the same misfortune is to eliminate entirely the fixed charges. This must be done, whatever else is accomplished by the reorganization. But obviously the general mortgage bonds are in a stronger position than the debentures—hence the former are given part preferred

stock, and part common, while the latter are given only common stock. The unfunded debt, both the merchandise and the bank loans, are considered on the same level as the debentures.

It is necessary to raise \$1,000,000. The preferred stockholders cannot be relied upon to come to the rescue of the failed road any more or any less than the common shareholders. The burden of raising the new money is therefore distributed evenly among all the stockholders. The preferred stockholders, in deference to their position, are given new preferred stock for part of their old preferred, whereas the common shareholders are given new preferred only for the par value of their assessment.

A comparison of the old and the new corporation is seen from the following table.

It is obvious from this table that the reorganization has accomplished a distinct reduction in the fixed charges; in fact the fixed charges are below the earnings during the poorest period of the receivership, when the business was suffering from a general depression and when the receiver had, admittedly, increased the normal maintenance by over \$1,000,000. The fixed charges were, in fact, only a little over half the net earnings of the year just prior to the failure. In addition to a reduction in fixed charges the reorganization had brought about a distinct simplification of the financial structure, and had secured a permanent cancellation of the floating debt and a considerable contribution of new money.

A part, at least, of the refunding operations of this plan depends upon the willingness of the holders of the underlying bonds to exchange them for new bonds. If these holders refuse to co-operate, or if they exact too high an inducement, the plan would

	OLD COMPANY	NEW CORPORATION
Total capitalization including unfunded debt, but not undisturbed equipment obligations	\$30,632,000	\$33,208,400
Fixed charge securities	19,699,000	11,564,000
Fixed charges not counting unfunded debt	1,030,210	578,200
Fixed and contingent charges	1,330,210	1,226,074

have to be consummated without their help. In that case the three underlying issues need not be disturbed. Such a plan would not bring about so great a simplification in financial structure, but there would be nearly as great a reduction in fixed charges. At all events the first mortgage bonds of the Sunboro and Eastern and all bonds and unfunded debt above these

should be changed from a fixed to a contingent charge security. In actual practice this would be accomplished through a foreclosure of the Sunboro and Eastern first mortgage 5's. As a result of a foreclosure of this lien, the equity of the general mortgage bondholders, the holders of the debentures, the unfunded debts, and the stocks would be totally extinguished.

REVIEWS OF BUSINESS BOOKS

ORGANIZATION AS APPLIED TO INDUSTRIAL PROBLEMS

*By Howard T. Wright, A.M.I.M.E., A.F.R.A.S.
xviii, 268 pp. London, Charles Griffin and Company,
Limited. American Agents, J. B. Lippincott Company*

REVIEWED BY GOULD L. HARRIS*

This book deals in a general way with the organization of factories in Great Britain. Its 25 chapters can be broadly divided into three sections: (1) philosophy and principles of organization, (2) functions and procedures of the chief departments of an organization, and (3) reorganization of existing methods with a view to increasing the efficiency of workers, machines, and management. Four chapters fall in the first section, viz., Introduction, Discipline, Labour and Capital and Quantity Production Organization. Twenty chapters comprise the second section. The last section contains only one chapter—Reorganization.

At the outset the author defines organization. He says it "covers the Financial, Commercial and Technical side of every business." His method of treatment is to present what he calls a "concrete" case, i.e., he has selected a medium-size plant which has a more or less typical organization and has described some of the main functions, records, and organization problems of the more important departments in this organization, as he frankly says, "in a more or less superficial way."

With a view of obtaining a "perspective" of the whole subject, the writer has "skimmed" the subject with a hope that the reader will at least get to the end and will find therein some help, or at any rate food for thought.

He makes no effort to lay down definite rules for carrying out the details of organization, "because the literature in this direction is considerable." The book, therefore, emphasizes principles of organization. Organization is defined as "a set

of principles which govern *all* the ways of doing *all* operations" as contrasted with system and methods which are "*one* way of carrying out *any* particular operation, or a set of operations, which may, or may not be the right way."

Good organization depends vitally upon personal control or touch. To quote from the book:

Up to numbers of 500, personal touch can be maintained to some extent with only a few of the aids which modern organisation provides, but with larger numbers it is extremely difficult to maintain the personal touch. Therefore, not only must the system employed be of a high order, but the personal control must be transmitted in such a way that it will be felt by all.

Quite a large number of really sound systems hopelessly fail, and others are very unpopular because—

1. They do not provide for the human element.
2. They are a trouble and not a pleasure to work.
3. They have not the goodwill of the operator.
4. They are not elastic.
5. They are carried to excess.
6. They depend upon an individual.

It would be interesting to know why the author selected the number 500. Systems must be devised, he says, so that men of average intelligence can operate them. Opposition to better systems he attributes to:

1. A natural dislike to change—laziness.
2. A fear that improvements suggested by anyone but themselves will not be an improvement at all—egotism.
3. A fear that if the change should prove a success, it will be considered in the light of a censure—cowardice.
4. A feeling that so many people have that they know better than anyone else how to do their own job—self-esteem.

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5. A general mistrust of what is called "scientific management," because it "comes from America," and because its failures are more widely known than its successes—misconception.

6. Ignorance and indolence.

"Defining everyone's responsibility and respecting it" is the author's suggestion for overcoming most of this opposition. Some of the opposition to better organization in Great Britain is "a very general mistrust of American Scientific Management." The author says this mistrust—

is largely due to a misconception as to what is actually meant by the term. It is thought that this misconception has been brought about largely by the literature, both American and English, on this subject. Unfortunately, there is a heartless scientific arrangement which makes the individual of very little importance, and is only designed with one view, that is, to obtain the very utmost from the worker at the expense of all other considerations. This, of course, is quite untrue, but, at the same time, many writers on the subject have grossly overstated their case, in order to appeal to a certain section of the community.

It is also undoubtedly true that some of the English and American writers have overlooked the importance of the *personal element*.

Equally as bad for organization as the mistrustful man, is the—

man who has read with delight some of the books on organisation, but without any deep study of them; considers that modern methods somewhat resemble wine, which can be poured into a glass, and commences with the confidence of ignorance to "pour" organisation into his works haphazard, and then, strange to say, he is surprised at the failure.

It is significant that the chapter on discipline follows Chapter I, which is the introductory chapter.

Discipline somewhat resembles all the successful religions, in that it must contain a promise of reward and a threat of punishment, of which the former must be most pronounced. . . .

Discipline itself is a very much misunderstood word; it is not control by fear. The old days of the *whip* are past. The finest code of rules enforced by the most drastic whip will not work in a modern English factory. It would simply cause discontent and revolt in a community with any education at all. True discipline is a force that comes from *within* and not from *without*.

One has to discipline one's self and not be disciplined; the driving force must be goodwill more than fear. It is thought that fully 80 per cent of the labour troubles in this country are caused by a misunderstanding of the word "discipline." Discipline must start at the *top*, otherwise it can never reach those at the *bottom*. It should be just as impossible for the general manager to disregard principles as for the smallest employee.

The best means to instil discipline is by encouraging "pride of firm," team work, and the spirit of the hive.

This encouragement is given in divers ways, as described in these pages, but a very important aid is the example set by the heads of the firm.

According to the author, the function of maintaining discipline should be one belonging to the Industrial Manager. His duties are commented on later in this review. In regard to the types of management developed by Taylor, Gantt, and Emerson in this country, the author says:

Rather severe criticisms are to be found both amongst employers and employed. The Trades Unions are almost universally hostile.

A most interesting movement, however, is on foot amongst some of the labour leaders to encourage the adoption of scientific management and motion study, with the express object of *decreasing the effort of the worker*, and not with a view to increasing profit.

In common with many other students of the industrial management the author contends that the conflict between capital and labor

can only be permanently improved by a very definite programme of education to convince both Labour and Capital that their interests are *identical*, and that whatever hurts one, damages the other.

It is doubtful if even the psychological school of economists believes that an economic Utopia would be reached if the following suggestion of the author were carried out:

If only the entire Press could be induced to combine and sink their political differences in this one question, engage the finest writers and speakers to teach this one text in season and out of season: *Labour and capital are equally important and neither can exist without the other*. Once get this thoroughly realised, and there will be no more labour war. Both sides will be seeking for peace, and all disputes will be easily settled.

A note of sourness and possibly undue pessimism is sounded by the author when he says in regard to the view-point of English labor:

Many cases of failure in joint management are due to the suspicion which exists on both sides, and the few splendid examples where it has been successful are simply those cases where the mutual suspicion was removed.

In America, labour admires the men who make good profits. In England, labour thinks that the successful man has been made rich by means of labour, and they claim "the fruits of their labour."

Soap box orators who have not entirely lost their sanity—if there be any such—will possibly disagree with the latter part of the following quotation:

It should be remembered, when considering this question, that the central idea is *not* to provide a method of paying the worker more in order that he should give a greater output; that is only an incidental consideration of joint management after it has been installed. The fundamental consideration is to create the best kind of *esprit de corps*, that is, to create a condition under which every one feels that it is to his interests to make a success of the whole undertaking.

Joint management naturally includes some form of profit-sharing, but also that is only incidental. A large section of the Trade Union movement resists profit-sharing, because it considers that it undermines its organisation. The Socialistic movement opposes all methods of this character because it considers that they retard the nationalisation of industry. The Socialistic movement is a very large one, and is a most unfortunate tendency. At the same time, there is no doubt that joint industrial management is a serious blow to nationalisation of industry in the larger sense.

An interesting comment on "co-operatives" is made by the author when he says:

Labour points with some force to the great co-operative undertakings in the North of England, which are undoubtedly very well run, but when taking this as an illustration of the way in which all industry should be run, it must not be overlooked that these undertakings are really a kind of a wholesale shop simply for home supply. It is quite a different matter to run a business which has to deal with world-wide competition, and it must be always very definitely remembered that foreign trade is of absolute vital importance to a country which possesses so very few raw materials as the British Isles.

His views on profit-sharing are also worth quoting:

In the writer's view, profit-sharing amongst the ordinary workers is not a wise or even fair method of payment. The worker has so little to do with profit-earning. Profit is affected by many considerations over which the worker has no control. He has no part in either buying, selling, or higher management. It is indeed true that the worker can affect the profit by working below his capacity, but it is quite possible that with extraordinarily efficient labour there would be no profit at all owing to faulty buying, bad selling, or even bad debts and faulty finance. It is, therefore, not fair that the worker should lose the reward of his increased effort simply on account of mistakes and bad management, over which he has no control.

It must be realised that the work-bench is not a suitable training ground for management. One cannot expect workmen to have the wide view necessary to enable them to deal with the larger questions of finance and commerce. With great advantage, however, Labour can manage its own affairs, but an attempt to allow it to manage matters for which it is not by inclination or training fitted will be sure to result in failure.

The chief advantage of the Whitley Council is that it brings the masters and men together. They meet and discuss many points, and, therefore, acquire a better understanding of each other's difficulties, with the result that disputes are more easily settled. Whitley Councils are necessary because of the general absence of such organisations as described herein. With the addition of more large firms that are run somewhat on these lines, Whitley Councils would only have to deal with the cases of smaller firms, where the business is not large enough to support such an organisation.

In large business undertakings, as well as in politics, management of their own affairs by all concerned will continue to prove the most successful form of government of undertakings and countries.

Twenty-nine points are suggested by the author for any scheme of "quantity production." One criticism of them is that they are too general to be of practical value to business executives.

II

The rest of the book following the chapters on the philosophy and principles of management is devoted to a discussion of the procedures in a plant of medium size

which he presents as a "concrete" case; and one chapter on "Reorganization," or putting the procedures into effect.

At the beginning of the second section of the book is a chapter containing a number of definite assumptions as to the character and size of the hypothetical plant considered. An organization chart of this concern is presented, followed by a discussion of the chief functions and problems of the officials and departments indicated on the chart.

This chart like other organization charts when read vertically shows the lines of responsibility; and when read horizontally shows the levels of authority. For example, under the board of directors comes the general manager and then the co-ordinating manager. Below the co-ordinating manager are the commercial manager, progress manager, and industrial manager—all on the same level of authority.

There are four departments under the commercial manager, viz., correspondence, general office, sales, and purchase, respectively. The functions in the correspondence department are typing, filing, works post, and telephone; in the general office, secretarial, financial, accounting, costing and insurance; in the sales department, advertising, estimating, inwards orders, invoices out, and credit; in the purchase department, stores, traffic, and invoices inward.

Under the progress manager, who reports directly to the general manager, are the progress planning, drawing office, works manager, and experimental work. The subdepartments under the works manager are works planning, manufacturing, assembling, inspection, tool and quarantine, internal transit, establishment and experimenter.

The industrial manager who also reports directly to the general manager has charge of the following subdepartments: engagement works council, timekeeping and works police, wages and premium, and welfare and amusement. At the bottom of the chart are the foremen, functional foremen and charge hands, shop (works) and experimental department.

These officials and departments are mentioned in detail because they afford

abundant opportunity for discussion, contrast, and comparison with organization charts in this country.

The functions of the officials and departments mentioned above, which may not be clear to the American reader, together with certain practices similar to our own, will be touched on in the rest of this review.

The personnel of the board of directors consists of the following:

1. The Chairman; preferably not a technical man, but one having a good wide knowledge of commerce, as well as possessing the capabilities that are necessary in a good chairman, namely: personality, tact, sympathy, a clear insight and judgment.
2. The Managing Director, or General Manager, need not be highly technical, but must have a wide knowledge of business management and commerce.
3. A director with good knowledge of finance.
4. A director with good knowledge of commerce.
5. A director with good technical knowledge of the undertaking.
6. One director who shall be either a commercial solicitor or well versed in commercial law.

The secretary of the company is not a director.

The duties of the general manager may be summed up somewhat as follows:

To prepare a programme for the approval of the Board, and then superintend its execution when approved. This involves, when deciding a programme, consultation with the Commercial Manager as to selling, and the Progress Manager as to manufacture, and receiving reports of progress from both departments as to the execution of the programme. Upon these reports decisions are made upon a multitude of questions involving policy in the general conduct of the business. These duties in a firm of this size are so great that they leave no time for the General Manager to be occupied with details.

The Commercial Manager understudies the general manager.

To the best of the reviewer's knowledge the term "co-ordinating manager" is not used in this country. Possibly the nearest approach to the work he does is that done by the "staff," an adjunct to some organizations. "Staff" in English organization means the people who work for a salary as distinct from wages. The co-ordinating manager like the staff in an American or-

ganization can only make recommendations. Neither has the power to issue orders for the carrying out of these recommendations. The co-ordinating manager after consulting with department heads issued "standard practice instructions."

Another important duty is to maintain the "plant ideal" instead of the "department ideal." He also inspects charts periodically.

Some industrial engineers who are "bugs" or "nuts" on charts may see a point of wisdom in the author's views on charts. He says:

Individual charts should be very simple, and there should not be too many of them. There is a very great fascination in the making of charts, and if care is not exercised, much time is wasted upon them without any useful purpose being served. At the same time, charts are of very great value indeed if used in moderation, and not carried to excess. A chart is far more convincing than any mass of figures. It conveys a much stronger impression to the brain, and is consequently more easily remembered, and, what is even more important, if properly designed, it conveys the idea of tendencies in a way that no set of figures can. Figures in themselves are cold, uninteresting things, while a chart is at least interesting to anyone who really wishes to know the facts, and does not wish to cover up defects. One has known cases where charts were cordially hated for the openly avowed reason that they made mistakes appear more glaring than they were. In business, no useful purpose can be served by closing one's eyes to faults. The methods of the ostrich sometimes temporarily succeed in politics, but never in business. The wise management will encourage, rather than blame, anyone who points out its own faults. All people who do anything at all make mistakes. The real failures in life are those which continue to make the same mistake over and over again, either from ignorance, obstinacy, or fear of admitting the mistake.

The commercial manager, who corresponds in a very small degree to our office manager, is solely interested in commercial and not in manufacturing matters. With a view to removing the antipathy that exists between the commercial and manufacturing departments, the commercial and progress managers are placed on an equality and both are equally responsible to the general manager. This is an observance of

the management principle of checks and balances. However, friction between the two classes of departments is not always prevented.

The work of sales, purchasing, and storage is discussed in a more or less outline form.

Many cost accountants in this country will take exception to the author's reason for using multi-colored stores issue notes (material requisitions) when he says:

It frequently occurs that errors arise in their analysis because they all have the same appearance, and the simple error of using a "3" instead of an "8" might cause great trouble in the costing department.

If care is exercised in putting the correct controlling account numbers on material requisitions there is no need for requisitions of more than one color.

Those who find stock record sheets or cards absolutely essential to proper cost accounting and production control will disagree with the following statement:

Some people consider that a stores ledger is a luxury. Others who have endeavored to balance cash values in stores have given it up as impossible. The large majority of firms do not attempt it. There are, however, some cases of conspicuous success. There is little doubt that the question bristles with difficulties, because in the methods usually employed such a large amount of detail is required.

The author seems to advocate the use of only the average price method for handling requisitions since he does not mention the actual cost method.

In his discussion of overhead known in Great Britain as "oncost" or "charges," the author mentions only the direct-labor cost or percentage on productive labor method of distributing overhead, and says nothing about other methods such as direct-labor hours or machines rates which are used extensively in this country.

The book includes twenty-one illustrations and charts which aid in understanding portions of the context. An interesting chart is entitled, Financial Position Chart, which is prepared by the costing department for the purpose of keeping the general manager informed of the financial position of the company from month to month.

The method of preparing this chart is outlined in considerable detail. Another financial chart called, Cash Requirements Chart, is prepared by the costing department for the commercial manager and the board of directors.

The advantages of a central correspondence department are discussed. The head of the correspondence office is the chief clerk. In this country the chief clerk is more concerned with accounting than correspondence.

The workers post subdepartment has charge of the collection and delivery of mail. The chief duties of the progress manager are to anticipate production, and to see that the "programme"—known in this country as the production schedule—is carried out.

One interesting chart which is the only one that bears much similarity to graphic production control as practised in this country is the one "used to show the balance or otherwise of output."

The Works Manager does not handle labour. This arrangement is made, firstly, because the management of labour requires one man's entire time; and secondly, the type of man which is eminently suited for works management is seldom suitable for the management of labour.

One has seen so many cases where a really excellent Works Manager has hopelessly failed simply because he has been unfortunate in his methods of handling men. Again, others are unsuccessful because they can handle men, but not manage works.

The management of a works is a matter of logic and reason. The respective qualities are quite often found in different individuals, but their combination in one person is unusual, and there are not sufficient unusual men to go round. This reason alone should be sufficient justification for providing two departments.

A further and very excellent reason for this division is that by it the Works Manager has so much more time to devote to the real functions of his office, which are to save waste of time, energy, and expense in manufacture.

Most people who have considered this matter at all have encountered Works Managers who spend anything from 50 per cent to 80 per cent of their time simply dealing with labour conditions and troubles.

The work of the subdepartment Works Planning differs from that of "progress planning," in that the latter deals with main principles, and the former with details, and is the channel

through which the Works Manager passes work orders on to the works proper. This involves careful study, and laying down of the operations in making any particular part, as well as the order in which these operations are to be carried out.

Those industrial engineers in America who claim that between 80 and 90% of the troubles in this country are due to inefficient management will agree with the author's statement:

Some faults on the part of the higher management in either buying or selling may lose in a single day more than a worker could lose in a year, even if he did no work at all.

One important duty of the manufacturing department is the training of workpeople. The people who do this are known as "functional foremen." They are directly under the foremen.

It is well known that the best and most skillful operators are often the worst teachers. Therefore, the "functional foremen" are men who are selected not solely because they are efficient operators, but because they have the capacity of imparting information to others. In the same way, the foremen are chosen because they can control men rather than because of their great skill as craftsmen.

Both the foremen and "functional foremen" are on the staff. They are paid a salary and not a wage.

The author seems to favor the single tool check system which is inferior to the double tool check system as used in this country.

The "quarantine" department is situated in the tool-making shop. The examination and repair of manufactured articles are here dealt with, which have been rejected by "inspection" or damaged in "assembly."

Repair of plant and running machinery is, however, handled in the "maintenance shop."

The author advocates the establishment of a separate industrial department, the head of which is responsible only to the general manager. His reason for the need of a separate department is that the problems which arise in the management of the industrial worker "constitute fully 50% of the total workers problems which have to be faced where a large number of men are employed."

The author's attention to detail in certain sections of the book is well brought out in the following passage:

The Industrial Manager should have somewhat similar personal surroundings to the Commercial and Progress Managers, in that he has a special office to himself, with a typist and an assistant in an ante-room. More care, however, is devoted to his office. It is large and well lighted, and decorated in a manner to convey the idea of sunlight. It is quite important that this room should not be sombre, impressive, or legal. Blue or grey should be avoided in the carpet or walls. The manager's chair and table should be placed in a position and at an elevation that will give him all the advantage that can be obtained in this manner when receiving "Deputations." The room must be well, but not expensively furnished; comfortable, but not ornate; seats should be provided for the "Deputation."

It is never wise to receive a deputation of work-people and to allow them to stand "hat in hand," feeling thoroughly uncomfortable. An endeavour is made to make them feel comfortable and at home, and introduce the idea of conference rather than a "supplication." The effect of environments is nowhere more marked than at the settlement of labour disputes.

An interesting bonus, paid in some cases, is the Social Bonus. It is thus described:

All the work-people, as opposed to the staff, are eligible for a social bonus, after they have remained with the firm for twelve months, and in case "welfare" advise favourably that their social habits are up to the standard laid down, the bonus is 5 per cent upon the basic rate of pay, not including overtime or extra payments. After two years this bonus is raised to 10 per cent on the same conditions, so that every workman, even though he should not be on the premium bonus work, can earn 10 per cent above the standard rate of pay. Premium, or piecework men, of course, earn more. The continuance of

the bonus is revised every three months by "welfare."

Staff bonuses are also paid. To quote:

All members of the staff, except holders of the industrial stock, receive a quarterly bonus in proportion to their salaries. To be eligible for this bonus members must have remained with the firm for longer than two years. This bonus is contingent on profits, and is paid out of a sum equal to 20 per cent of the surplus, divisible profits, after payment of interest on the first preference shares, but before payment of dividend on industrial stock, so that all members of the management are interested in the profits of the undertaking. The amount to be divided is ascertained from the previous year's balance sheet, and paid out quarterly in the succeeding year.

III

The third and last chief section of the book deals with "Reorganization," i.e., the carrying out of a betterment program. The author offers the following suggestions for "reorganization" work:

1. Appreciate the conditions.
 2. Lay down the ideal object to be sought.
 3. Co-ordinate difficulties against the ideals.
 4. Set down the compromise to be aimed at.
- One should realize that much time is required to change a works from the old to the modern methods. Much can be accomplished in the first six months, but the complete change will occupy from three to five years, depending upon the conditions at the start.

While the book is very "sketchy" in many places it contains much material of interest to the American student of industrial management.

One closes the book, feeling that the author devotes entirely too little attention to reorganization.

STRAIGHT BUSINESS IN SOUTH AMERICA

By James H. Collins. ix, 305 pp. D. Appleton & Company

REVIEWED BY C. T. MURCHISON *

Mr. Collins has performed a real service for those interested in South American markets. Not that he has produced an elab-

orate and scholarly work heavily weighted with statistics and technicalities. Nor is it of the exuberantly optimistic type. It is rather a simple, straightforward statement of the things which the average ex-

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porter needs to know if he is to be successful in dealing with the Latin Americans.

The author has rightfully assumed that the exporter will want first a vivid picture of the peoples in the various South American republics, the types of goods in which they will be interested, the actual agencies of transportation, of finance, of wholesale and retail distribution, and consumer advertising. He wants to know about the equipment and the training of his selling agents. He wants to know the psychology and the methods of his competitors. He wants to know not only the advantages but the disadvantages, not only the "sure things" but the difficulties. And he wants to know the possibilities for growth.

To the task of satisfying these wants, Mr. Collins set himself. He draws his material mainly from five countries: Argentina, Brazil, Chile, Uruguay, and Peru. As stated in the preface, "The book grew out of a series of articles written for *The Philadelphia Public Ledger*, during an eight months tour of the major South American countries." The author's writings on South America are also familiar to the readers of *Printers' Ink*, *Successful Banking*, *The Country Gentleman*, and *The New York Tribune*.

That Mr. Collins has a true economic sense is well demonstrated by the recognition of the importance, not only of our export trade, but of our import trade as well. He points out that no great progress can be maintained relative to the former, unless the latter continues to flourish. This is especially true under post-war conditions when the process of settling trade balances by triangulation is so much more difficult than it used to be. To many Americans there should be much food for thought in the fact that in the last normal year "we sold Latin America \$330,000,000 worth of goods, and purchased \$477,000,000 in return. During fiscal 1918 we sold the ten South American countries \$307,000,000 worth, buying back from them nearly twice as much, \$565,000,000, and to the ten Central American countries \$411,000,000 worth of goods, taking \$457,000,000 worth of their products."

Another praiseworthy characteristic of the book is the ready frankness with which

Mr. Collins discusses the shortcomings of the American exporters. Too often they are inclined to be romanticists. And this does not clear the eyes to facts:

Not clearly visualizing the Southern continent, with its diversified peoples and climates, the business man soon loses interest, fails to back up his representatives, forgets all about the potential market like a tale that he read somewhere. Bluntly, he is splendid when he starts things in that corner of the world, but the Briton, German, Italian, Frenchman, and Spaniard beat him in at the finish because they stick, and he doesn't.

Another weakness of many exporters, one which was especially evident a year ago, not only in our South American trade, but in our trade with the Orient, is well described in the following passage:

The romanticist can enter Latin America with an air castle. Business slackens at home. He turns to export trade. Probably by the time his salesmen make headway abroad, business is good again at home. His Latin American orders are skimped, and his connections neglected. He regards the Southern continent as an easy market for his surplus and seconds, a place where goods sell themselves without trouble or expense, to be entered any time by mailing a few circulars or catalogs. The department heads are called together, there is a "South American Week" at the home office, and the air castle is fabricated. But next week interest centers on something else, and South America is forgotten—the air castle never got its foundation.

In addition to this inconsistency in policy which is attributed to lack of "business imagination," there are to be found numerous cases of downright "dishonesty" which, says Mr. Collins, make the "Yankee traveling on the Southern continent ashamed of some of his countrymen." For this reason he advises strongly that the representative of an American business house "take our business astigmatism into account, and insist upon such things as:

One, an ironclad contract binding the American business house seeking export trade to a consistent policy instead of a passing adventure.

Another, that the goods which the representative is to sell in Latin America must be allotted to his territory, and nothing in the way of unforeseen demand or production difficulties at home be allowed to interfere with the shipments that are vital to his success.

Furthermore, that the selling effort in Latin America shall not cease with a few shipments, nor the first three months' activities, but be planned for several years, so that real connection can be made, and outlets be created for the surplus of five or ten years hence, when they will be needed and badly.

But perhaps the most serious deficiency which we display in our trade with the Southern Continent is our lack of reliable information as regards the needs of the people, their psychology, their business customs, and their physical environment. "I don't know whether the Uruguayans use towels" a Philadelphia manufacturer wrote, "but if they do, we have some fine products in that line." And many of us think of umbrellas as being serviceable in the nitrate fields of Chile.

Another popular misconception exists relative to the magnitude of the distances in South America. We are told of an American manufacturer who advertised his goods in a Rio de Janeiro newspaper and referred the Brazilians to his dealer in Quito, Ecuador. Now the quickest way to reach Quito from Rio de Janeiro is by ocean liner to New York and down the West Coast through the Panama Canal.

It is a common and costly notion cherished in many offices, that one man in South America can take care of any inquiry or complaint, jumping nimbly from Buenos Aires to Para, Bogota, Corumba, and where not, and "fix things up." Accustomed to his Limited, when the Old Man sends a salesman to South America he will keep him traveling from point to point, wasting half his time on ships or trains, playing him like a fish at the end of the ocean cables.

But unfortunately all of the difficulties involved in the development of trade with the republics to the south of us are not attributable to deficiencies on the part of the United States business man. If that were so, the day of complete dominance in those markets would not be far distant. By far the greater obstacles which stand in our way are those for which South America alone is responsible. For example take her transportation systems.

Brazil has 20,000 miles of railroad, nearly one third that in all South America, but it is largely a fringe of toy railroad along the seaboard. After a few well built systems have been enumer-

ated, the rest is narrow-gauge, poorly located, with rolling stock of such small capacity that only the most valuable commodities can be hauled, like coffee, and those at high rates, and often unprofitably. . . . (In Argentina) with the eight-ton "goods van" it is not possible to get our advantages in low freight rates on distance and tonnage. . . . (Chile's) 5000-odd miles of railroad have seven different gauges. . . . For South America as a whole, there is only a single railway running from the Atlantic to the Pacific, connecting Buenos Aires with Valparaiso, and that has three different gauges and involves two changes of cars.

A second obstacle of colossal proportions consists of the economic status of the masses of the people. In only a few limited sections, we are told, does there exist a true middle class. The usual division is a small upper class, and a large lower class of peasants. North Americans will wake up with a start to this statement:

Three fourths of the South Americans are country and jungle dwellers, living on the ground or in the bush, with a few sticks, palm leaves, blocks of dried mud or scraps of sheet iron for a house, a few gourds and earthen pots to cook in, and a few bundles of rags for clothes and bed.

So unpromising a condition as this cannot be overlooked, even if we are told, as is wholly true, that "South America has wonderful cities, grand opera, fine race courses, beautiful women, great newspapers, and a culture older than our own, and that Rio and Santiago are more than one hundred years older than New York."

A third obstacle of the most discouraging type in South America, is its generally unscientific, and in many cases obsolete, methods of taxation and tariff.

Thousands of American manufacturers fail to realize what tariffs mean in South America, where there are ten different republics, each with its tariff complexities, and each differing from all the others. It takes a professional customs expert to keep posted on all the regulations. Trivial oversights in packing, description, classification, valuation and the like will lead to fines and delays. A shipment of goods will pay not only tariff duty . . . there will be a sur-tax upon the duty, and if the goods are subject to internal revenue, there will be a further charge for stamps. . . . Oversight may impose a fine on top of that. It takes from two weeks to two months to pass goods through South Ameri-

can customs houses, and tariff laws are so complicated by special rulings that in some countries the latter are published daily.

Much inertia is there to be overcome also relative to advertising media and methods. We are told that South American newspapers are solid masses of closely set advertising, much of it classified. The Latin American advertising man makes his readers work hard for a very small amount of business information. It is encouraging to note, however, that the newspaper publishers are now studying and adapting our methods of making news better written and more attractive.

In the matter of advertising, it is clear that the American exporter must assume complete responsibility both in selling to the trade and to the ultimate consumer. As regards the latter, the majority of him never sees a newspaper, and therefore to get business news and comprehension to him is a problem of no small dimensions. Some of us jumped to the task eagerly but somewhat ludicrously, as advertising copy made in the United States has its dangers. For instance we learn that:

Again and again the Argentinos, Chileans, and Uruguayans are confronted with advertising illustrations made in the United States and supposed to be typically South American, showing men wearing broad Mexican sombreros, with palm trees in the background. Of course the sombrero is no more common in Buenos Aires or Santiago than in Boston, nor palm trees any more plentiful than in Chicago.

The reader should not judge from the quotations so far made that Mr. Collins takes South American trade possibilities lightly, or that he in any way has the attitude of a skeptic. This is far from being the case, for every unfavorable revelation which he exhibits is matched by constructive and optimistic criticism. For example, referring once more to consumer advertising, Mr. Collins points out the variety of "dealer aids" with which the American exporter can help stimulate retailing. He advises strongly against the use of such "kindergarten methods as circularizing merchants from the United States, sending samples by parcel post, and the like."

American exporters cannot be too strongly impressed with the importance of having

their Southern representatives properly equipped. Not only a knowledge of the language, people, and business methods is requisite but also complete powers of attorney. Under South American law, it appears that no contract is binding unless the agent is vested formally with the power of attorney. Of such investiture there should always be available documentary evidence.

Selling methods in South America which are planned for long-time results should always be coupled with service facilities, and with instruction on the use and care of the goods exported. This is especially true for tools, machinery, and mechanical equipment. South Americans are not generally blessed with mechanical turns of mind, and in consequence display utter helplessness when a machine goes wrong. Tragic experiences have been had with automobiles, elevators, railway equipment, and gas engines.

Such a state of affairs calls not only for teaching and instruction, but also for exceptional sturdiness of the machines sold.

No survey of South American trade conditions would be complete without references to the nature of the competition we are to expect from other foreign enterprises. Prior to the war Great Britain led in South American markets. British strength there is not a matter of nationality or sentiment. It rests upon reputation, connections, investments, and being "Johnny-Bull-on-the-spot." John Bull has a strong banking organization, and the advantage of London as the world's financial, trading, and shipping center. That the war has not fundamentally shaken these advantages is Mr. Collins' opinion.

It is also worth while for the American to know that "La Senora" buys her hats, gowns and lingerie at French shops in Buenos Aires—not the "near French" shops of New York, but large branches of famous Parisian establishments. South American homes are furnished with French furniture, carpets, draperies, and works of art.

British department stores are also found in these capitals, stocked almost entirely with British goods in normal times, and so thoroughly British in their methods and atmosphere that they might have been lifted bodily from Oxford Street.

Warning of future German competition should be well taken. Germany was third in South American business at the beginning of the war. She had an ideal system of marketing, with personal contacts, service and liberal credits, and an organization at home that made whatever the customer wanted, no matter how peculiar.

Such resourcefulness cannot be overlooked.

Mr. Collins' book does not say everything that can be said on the subject. He himself urges the use of other supplementary material. But all in all the book is well worth while, and cannot fail to give its exporting readers a more intelligent and constructive attitude relative to selling in the Southern hemisphere.

ELEMENTS OF BOND INVESTMENT

By A. M. Sakolski, Ph.D., Formerly Bond Expert of the Equitable Trust Co.; Author of "American Railroad Economics." 158 pp. The Ronald Press Company

REVIEWED BY GEORGE C. HANNAHS*

Many discussions of the fundamental principles of bond investment assume that the average investor is familiar with the highly technical nomenclature of the professional banker.

The bonding of a railroad, of a municipality, or of a great industrial concern is a simple process but one would never suspect it from the manner of treatment of the average economist. In reality, there is little more involved in the familiar process of mortgaging a homestead than there is in the bonding of a million dollar corporation.

When the homestead is mortgaged, money is usually required for the functioning of that household. This is a simple, human problem and can be clearly defined and readily understood—the boy is to be sent to college; an illness is to be financed; a wing is to be added to take care of a growing family. Most of the problems of an expanding business or government will parallel the perplexities of this homestead and the financing of the business and government will follow closely the process of mortgaging the household.

One of the regrettable aspects of modern business literature is the tendency to befog the original simple basic principles of trade and banking. In many of the books on finance and commerce which come to my desk, I find authors building up profundi-

ties of systems and methods which are confusing to men who have spent most of their business hours in the practical application of the principles involved.

Professor A. M. Sakolski, author of "Elements of Bond Investment," has refused to be led into this academic fault in his illuminating volume on the fundamental principles of investment. He makes a simple, direct approach to his subject, analyzes, without pretence, the difficulties of modern investment, classifies types of bonds, and clarifies the function of varying securities.

I find the brief sketch of the genesis of modern investment truly illuminating. In a page or two Professor Sakolski traces the roots of modern finance and the rapid accumulation of wealth after the Napoleonic War; the displacement of hand labor by machinery; the expansion of industrial undertakings beyond the capacity of the individual and partnership to present-day business organization.

This brief survey makes way for clear, short, specific chapters dealing with the many forms of modern bonding.

The chapters on government and municipal bonds are particularly sound. His statement that national credit is based entirely on confidence ought to be extended to apply to all bonds. Also I think that Professor Sakolski might have emphasized a little more clearly the social and human

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element as a factor in modern credit. He touches upon this point briefly in his consideration of public service bonds. He might have gone into the subject more thoroughly in his discussion of the industrial bond. The character aspect, as we have come to call it, is of growing importance, not only in the consideration of public attitude toward public service corporations

but also in the public attitude toward all business and corporate concerns.

"Elements of Bond Investment" is a handbook which ought to be in the library of every investor. I particularly recommend the size and shape of the book which makes it one that can easily be slipped into the pocket for occasional perusal.

STATISTICS IN BUSINESS

By Horace Secrist, Ph. D., Professor of Economics and Statistics, Northwestern University, etc. 130 pp. McGraw-Hill Book Company, Inc.

REVIEWED BY J. W. SCOVILLE*

The subject of statistics is not generally rated as one which rivets the reader's attention to the page until the fire goes out and the clock strikes midnight. Books on statistics will hardly be classed among the best sellers until the typical citizen has lost a considerable amount of red blood. Professor Secrist has written a readable little book in a field where it is difficult to give a popular presentation of a technical subject. The author's purpose is stated in the preface:

The volume is not intended to be a treatise on statistics. Its purpose is to serve as a handbook for executives and others in responsible positions in the application of business statistics to problems which currently arise.

No statement is made of the extent to which business men are actually using statistical departments or of the functions or organization of such departments. The book is rather a brief statement of elementary statistical principles which are applicable to all statistical work.

In the first chapter, the author makes a plea for the scientific analysis of business facts:

Scientific analysis of business and industrial problems requires, first, a point of view, and second, a method. The point of view is an unconditional demand for the truth; the method is (1)

intelligent observation; (2) impartial analysis; (3) logical inference; and (4) sincere application of the conclusion reached to the problem to which the facts and observation apply. Business facts are numerous and increasingly complex; they are ever changing in content and application. To know them requires keen observation; to secure them, organization; and to apply them, determination and business integrity. There is a science of business and industry, the underlying facts and principles of which can be determined, and they must be applied, if planning and foresight are to take the place of guessing and rule-of-thumb action.

Business and industry need facts, but most of all they need analysis of facts and application of them to current problems. Business will not run on, but down, on the momentum of customary action. Fresh and continuous analysis of facts is indispensable. The need is for an appreciation of facts, an ability to observe truthfully the conditions which produce them, and a determination logically to use them in such a way that they will serve as rules for business guidance.

Sources of information for many kinds of business facts are given in Chapters II and III. Statistical data vary in quality as much as the flavor of muskmelons. First quality data must be (1) homogeneous (2) representative (3) germane (4) stable (5) comparable and (6) accurate. Nothing less than whole-hearted support of scientific methods on the part of managers will do.

The technique of scientific method will have to be applied by the expert, but he should have

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not only the sympathy but also the co-operation of all those in whom any responsibility rests. An *esprit de corps* is indispensable.

Scientific method has been defined as a state of mind, and this is probably a true characterization if the condition is added, that the point of view it represents is consistent in seeking the truth and being guided by facts not at one time, in one place or under one condition, and ignoring them when it becomes advantageous, or when they are difficult to determine, but in all places, at all times, and under all conditions. Cost accountants, statisticians, and industrial engineers, in the study of business, are continually finding conditions which are deplorable; where every principle of scientific method is violated, and where businesses are running on without cost figures, depreciation reserves, sales analysis, and comparative and basic operating data. A remedy is sought at the hands of the expert, but only for certain specific ills, and not for a complete constitutional treatment. Changes are introduced with fear and hesitancy, doubt characterizing every innovation.

This is not the spirit of scientific method. To

the fact analyst, facts are facts. They are welcomed for the truth they contain. The attitude toward them and toward the changes which they make imperative, is positive, receptive, and open minded; not negative, doubtful, and hesitant. It is not a *little* truth, but the *whole* truth, which is wanted. Nothing is too sacred, too old, nor too customary to be challenged. Truth from whatever source is sought out and welcomed, and applied to problems as they arise.

Chapters IV, V and VI, show how to tabulate facts and how to represent them correctly by graphic charts; also how to summarize the facts through the use of averages and index numbers.

The reading of "Business Statistics" should convince business men that handling of statistics has a technique that has been developed by many students and investigators; and that the trained statistician who is given authority to function, can make a real contribution to modern business.

THE PARTY OF THE THIRD PART

By Henry J. Allen, Governor of the State
of Kansas. 283 pp. Harper & Brothers

REVIEWED BY JAMES M. LEE*

Publishers' press agents usually put on jackets of books "blurbs" that are so obviously flamboyant that neither reviewer nor reader takes them seriously. Such, however, is not the case with "The Party of the Third Part." The statement on the jacket thus outlines the contents of the book:

Whether you are an employer or an employee, or just a member of the party of the third part—the Public—the strike is your problem. Here is the story of Governor Allen's experiment to do away with strikes and to settle disputes between capital and labor. He introduced a new kind of court of law—the Kansas Industrial Relations Court and gives the results after it has functioned one year. Governor Allen explains who the court members are, how they are chosen,

how they decide cases, and the number of cases that have been settled without recourse to strikes, how the court fought gallantly against radical attacks, etc. Included, also, is a complete account of the famous Allen-Gompers debate, and important speeches by some of America's leading labor leaders of today.

In this volume Governor Allen, who in the April number of *Administration* reviewed Mr. Gompers' latest book, assumes the rôle of attorney, not for the employer nor for the employee but for "the party of the third part"—the public. The obstacles to overcome he sets forth as follows:

From the moment the court was established the radical union-labor elements began to organize for the campaign to defeat the Industrial Court. Their first wish was to repeal the law, and, failing in this, to secure the election of a legislature that would so alter it or load it down that it would become ineffective.

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To this end an ambitious combination was effected—a coalition of radicals, Non-Partisan League farmers, and Democrats. The campaign was directed against the head of the state ticket and the legislative candidates, and the workers set out upon a systematic effort to misrepresent and discredit the law.

The matter was taken to the court of public opinion for a decision at the ballot box with the following result:

The jury had two chances at expression—one in the August primaries and then in the general election in November. The result was a clear-cut vindication of the law in so far as its standing in the minds of the people is concerned. The fight was bitter and vindictive in many cases, but even the opponents of the law have accepted the result in good humor.

On the surrender of personal liberty in exchange for civic freedom, Governor Allen says:

The radical is prone to trace existing evils to the "capitalistic system." A change to a socialistic or communistic system would not help, however, for the latter would have the same defect as the former—the unrestrained use of economic power. Such a change would be merely jumping from the frying pan into the fire. Witness Russia. The only genuine method of relief is through agencies carrying out the American ideal, which, in its essence, is the applied Golden Rule.

When government stepped in and began to regulate capital, the capitalists protested that their "liberty" was being restricted. The same protest is heard when government proposes to regulate industrial disputes. Labor leaders protest that their "liberty" is being restricted. Both elements must come to recognize the eternal fact that liberty is only a relative term. The liberty exercised by one man may constitute his tyranny over another man. No man liveth to himself. The only perfect liberty is found on a desert island. As men become more civilized they find it necessary to surrender a part of their liberties in exchange for the advantage of complex relationships.

The following distinction is drawn between the right to quit work and the right to strike:

The right to quit work is entirely different from the right to strike, as any fair-minded person must concede. Even if the Kansas law were primarily an antistrike law, which is not the case, it would still be extremely untruthful to

say that the law would deprive a man of the right to quit work.

Striking, in the meaning universally accepted by all—organized labor included—carries with it the very necessary and important implication of resuming work after demands are granted. Striking, therefore, is not abandoning the job. On the other hand, it implies the opposite idea—a rather marked desire to keep the job so as to get higher wages or other desiderata. The fisherman does not jerk the fly past the trout because he is trying to get the fly away from the trout. The striking workingman does not strike because he is going to quit work.

There is no reason why legislation could not be enacted, if desired, that would sharply differentiate between striking and the mere quitting of work. A law against abandoning a job would be obviously in conflict with the Thirteenth Amendment. No one would be so stupid or shortsighted as to propose any such law. And for that matter, perhaps, there is no pressing need for any law to prevent striking, except where such striking threatens the lives or welfare of the public.

By way of proof Governor Allen adds:

In his book, "Business and Government," Dr. Jeremiah W. Jenks differentiates between quitting work and one phase of striking, as follows:

The right of any man, or of all men, to quit work cannot be taken away. Very likely the right to strike can: that depends upon what is done after the quitting. It is most unfortunate that the judges, clear-headed as they usually are, have not always made these distinctions plain, but often have confused the mere quitting of work with one or more activities, picketing, boycotting, or what not. The legality of the strike, as also its morality, depends upon the character of the measures by which it is supported.

In discussing collective bargaining Governor Allen calls attention to the following fact:

The Kansas law does not abolish collective bargaining. It legalizes it, and the court is not supposed to interfere in any labor controversy until after the fullest opportunities for conciliation and arbitration have been exhausted, because we realize that the finest basis of industrial peace is that which is founded upon mutual understanding and mutual advantage; but when every honorable effort to reach an understanding has failed, the Kansas court steps in and presents its program as a substitute for the strike.

In another chapter Governor Allen stresses these points just made as follows

There may be good reasons why labor leaders will eventually cease to stress collective bargaining when it is seen that it must necessarily imply the commodity theory of labor to some extent. Labor has two functions. One is the personal—or it might be called the spiritual—phase. It is that function of labor that represents the worker giving his life's vigor to the daily task. When a man gives a part of his life to a thing he is not selling a commodity. It is a repellent idea to think of a man selling his very self. In this respect labor is not a commodity. But there is the other function of labor—the tangible element with an exchange value. Labor is readily translated into product. Labor is the one and only thing that gives iron any value. If no labor was required to produce iron—if it could be snatched out of the air without effort—iron would have no value. Iron is bought and sold. It is a commodity. It is the labor that is bought and sold, for the iron without the labor is valueless.

When a man "lays off" because he has enough money to tide him over an idle period, he is playing his money—capital—against labor. He is conceding that his money takes the place of his labor. He is admitting that his money is equivalent to his labor. This is not a sentimentally attractive statement of the case, but it is true. In considering the spiritual value of labor we must also remember that house rent, fuel, food, and other things may sometimes also partake of the semisacred characteristics, for they may mean the difference between life and death. They may represent life, as does labor. And they have a cash value. They are commodities, in one sense. The Kansas law seeks to safeguard all of the sacred rights of men, whether they be the rights to fuel, food, clothing, or the rights to fair living and working conditions. It would keep a sane balance between the sacred human rights and cash or property rights.

Clearly and succinctly Governor Allen thus emphasizes the economic fact of diminishing returns:

If the argument for a six-hour day is based upon the desirability of reducing per-capita production, and thereby providing more jobs at the same pay, the same argument will apply to still shorter days, with equal force. There is no limit.

And yet in the final analysis there is a limit which no man may arbitrarily set, and yet which is as inexorable as the law of gravitation. That limit is set by what is sometimes called the "law of diminishing returns." Even though the exact point of its application cannot be determined, it must be reckoned with as a stern economic fact.

By way of specific illustration he takes a locomotive as follows:

A locomotive may be made to travel fifty miles an hour upon a certain number of tons of coal per mile. The crude reasoner would say that doubling the amount of coal per mile would cause the locomotive to travel one hundred miles an hour. But the railroad man knows better. The engine would probably travel sixty miles an hour, the fire box and flues would likely be damaged and the roadbed disturbed. The passengers would be endangered and disaster would be invited. Fifty miles would be the pivotal point of efficiency. Beyond that point the returns for the amount of coal consumed would be diminished.

In justice to the Governor of Kansas the following quotation about the good work done by unions should be made:

Unionization has done great things for labor. It has brought about shorter hours, better working conditions, and better pay. It has brought labor a more complete reward for its true worth. Organized labor, by getting better laws, has quieted the fears of those employers who opposed those laws. Employers have come to like the laws, regulations, and customs because they have found that it paid to treat workers well.

Unionization has flourished. Workers found that it paid to unionize. This fact has led some of them to believe that if a ton a mile is good, two tons a mile will be twice as good. Some of them believe that if an eight-hour day is good a four-hour day is twice as good. They do not reckon with the law of diminishing returns. There is a pivotal point somewhere which they may not pass without endangering not only the interest of society as a whole, but their own as well.

This review may well conclude with the question which Governor Allen asks Mr. Gompers to answer in the famous labor debate held in New York City:

When a dispute between capital and labor brings on a strike affecting the production or distribution of the necessities of life, thus threatening the public peace and impairing the public health, has the public, the party of the third part, any right in such a controversy, or is it a private war between capital and labor? If you answer the question in the affirmative, Mr. Gompers, how would you protect the rights of the public?

Some of the decisions of the Industrial Court are to be reviewed by the Supreme

Court of the United States. Obviously, therefore, it will be out of place to express critical comment about the court until these decisions are handed down. A sincere attempt has been made to let the book speak for itself through liberal quotations which technically may exceed the courtesies of the copyright.

These quotations not only constitute a sort of brief in the case but also indicate the mode of delivery of the attorney for "the party of the third part" as he seeks

to secure justice for the public in labor disputes.

So much misunderstanding has existed about the purpose and aims of this court that the book—to use an over-worked phrase—fills a long-felt want. If the industrial court settles labor disputes satisfactorily in Kansas, it will doubtless be established in other states. If so "The Party of the Third Part" becomes the most important contribution yet made to the literature of industrial relations.

THE ESSENTIALS OF ADVERTISING

By Frank Leroy Blanchard, Formerly Managing Editor of "Printers' Ink," and Editor of "The Editor and Publisher." vii, 322 pp. McGraw-Hill Book Company

REVIEWED BY JOSEPH W. PIERCY*

In taking up the study of advertising it is important that the beginner should get started right and the aim of this volume is to help him get such a start. When he has assimilated its contents he can then proceed through actual experience in the field and further study to build upon the foundation he has thus laid until he becomes a skilled practitioner of the art of advertising.

In the statement quoted above, Frank Leroy Blanchard, the author of a new book called "The Essentials of Advertising," sets forth his purpose, and in the light of this purpose his work must be judged.

A discussion of the more advanced problems of advertising is purposely omitted, he says, as such problems have no place in a book of this kind.

What Mr. Blanchard does claim in the way of originality is the selection of material for his special purpose and his arrangement of it. Drawing upon his experience of several years as an instructor in the Y. M. C. A. at Twenty-third Street, New York City, he has endeavored so to present the contents of his book that the reader "is led from one subject to another in logical order." He believes that students should take up the writing of advertisements after the fourth lesson.

While Mr. Blanchard concerns himself particularly with a clear and simple statement of first principles he does insert in his textbook much more material about mediums than the usual elementary work contains, devoting twelve chapters to this purpose. A chapter on "Motion Picture Advertising," we believe, is a new contribution to textbook literature. "Specialties" and "House Organs" also receive considerable space. Carrying out his purpose of presenting essential things for the beginner still further Mr. Blanchard adds a chapter on proofreading with the marks used by the proofreader, and finally gives a valuable three pages to bibliography. At the end of each chapter the author presents a list of questions to help in testing the student's knowledge of the subjects discussed.

In his preface Mr. Blanchard expresses his indebtedness for assistance to twenty or more men whose names are well known in the advertising field as experts in particular lines.

True to his belief that students should early be assigned to the writing of advertisements in order the better to enlist their interest, the author devotes the third chapter to "How to Lay out an Advertisement," and the fourth chapter to "Advertisement Construction." In such assignments, nat-

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urally, the simplest advertisements are employed in the exercises, examples of such advertisements being shown in the text. Teachers of advertising, we believe, will have much sympathy with this point of view as some textbooks now being used require considerable rearrangement by chapters in order to bring the practical work forward early in the course. The doctrine of Squeers, that a student after spelling the word "horse" should go out and curry one, has some basis in modern psychology and present-day educational methods.

"Putting the Advertisement into Type," is one of the most valuable chapters in the book for beginners because of the simple and adequate presentation of facts about type. Too many facts on this topic are likely to confuse and discourage the beginner, especially if he is called upon to distinguish among many families; the author restricts his examples to five that are in common use.

There is little in the book for an experienced advertising man, there being a lack of finer distinctions to general definitions and applications of principles; but when we are disposed to refer to such inadequacies we are reminded again of the author's purpose and of his statement that more advanced problems are purposely omitted. In his chapter on illustrations, for example, he indicates the four purposes of pictures; advises never to use a picture simply because it is pretty, odd, and striking; says many advertisements are spoiled by poor and

meaningless illustrations; shows how copy must be prepared for the photo-engraver; explains what kind of engravings there are; gives the manner of determining the dimensions of an engraving when one dimension is known; and explains why high-grade art is necessary.

What might be regarded as a little departure from the author's purpose is the insertion of a chapter on "Business Getting Letters." He was no doubt led to do this following his chapter on direct and mail-order advertising, but the subject is one with which a teacher can do little except with advanced students having considerable knowledge of copy-writing and of applied psychology. The author has been compelled to confine himself to generalizations such as, "make your letter personal in its appeal," "adapt the length of the letter to the nature of the appeal and character of the audience," "cultivate conciseness," "get away from stereotyped expressions," all such generalities being harmless in themselves but not getting very far. The chapter, however, does no great harm, but may be regarded in the light of something "extra."

More than 50 pages are devoted to reproductions of advertisements that have recently appeared in representative mediums.

On the whole the book may be said to carry out the writer's aim in trying to give to beginners a "comprehensive view of practical advertising."

REVIEWS OF BUSINESS PAMPHLETS

A Method of Accounting for Scrap. By C. B. Williams, National Association of Cost Accountants, 130 West 42 Street, New York City.

A cost question which is always of interest and somewhat perplexing in many cases is the accounting for scrap.

Mr. Williams' article is appropriately named. He does not attempt to cover all the methods of accounting for scrap but confines his treatment to one method "which may be used when it is impracticable to credit scrap values directly to the orders. Scrap created through inefficiency or as a result of accidents of one kind or another" which would require entirely different treatment is not discussed in the article.

One of the most noteworthy features of the article is the method of presentation. The writer has followed what in the legal field is known as the case method. Cost accounting seems to be a subject which is particularly adapted to this mode of treatment and cost problems, for the most part, lend themselves to this type of solution. The author first presents the chief principles involved and then goes on to show how these principles may be applied in four concrete cases which are explained in considerable detail. By limiting the scope of his article to one definite subject and by illustrating the application of the principles advanced under actual working conditions he has succeeded in effecting a presentation of the subject which is clear and compact and which might profitably be adopted in many other cases where it is desirable to show the development of standard practice from the study of concrete situations.

Before handling the accounting for scrap intelligently he says:

It is first necessary to decide the fundamental relation which scrap bears to raw material and to the finished product. In determining this relation, the solution which ordinarily first suggests itself is the one which lies along the line of least resistance, and it is probably for this reason that scrap credits are frequently made to general overhead or to miscellaneous income account. The first analysis is likely to follow a line of reasoning and result in a conclusion somewhat as follows:

The treatment of scrap credits is at best only a sort of necessary evil. It will require a vast amount of detail even to approximate the proportionate values of scrap produced in making each kind of finished product from the same original unit of raw material. It will require further detail to distribute, even by approximation, the credits due to each line of finished goods. I will therefore credit the value of scrap to general overhead.

The unsoundness of this procedure is at once apparent if it be remembered that scrap is an item relating entirely to material costs and cannot, by any line of reasoning, be associated with the items making up general overhead. It would be quite as logical to consider returns and allowances as an added cost of sales instead of as a reduction of the sales. All scrap credits should apply directly or indirectly against raw material costs unless such a procedure is absolutely impracticable or impossible.

This is especially true when the scrap has a recoverable value as raw material.

Of course, the ideal method would be to credit the scrap value directly to individual orders or items, but it is the intention to confine this paper strictly to those cases in which this procedure is impossible.

The problems involved in each of the cases mentioned were the same, namely:

The production of scrap of high raw material value.

The impossibility, under the conditions, of crediting the orders with actual values produced.

How to handle the values in such a way as to distribute them as equitably as possible to the several items entitled to these credits.

The solution for these problems which the writer suggests as the most feasible may be summarized as follows:

Establish a standard unit raw material quantity charge for each item, and also a standard salvage credit if this be possible.

Charge each order or item with the total raw material requisitioned against it.

Credit each order or item with its proportion of salvaged material as determined from the standard unit quantity charge or credit, charging salvage account with the amount of the credit adjustment. Salvage value must be determined in each case according to the use which is to be made of the salvaged material. Credit salvage account and charge, according to requisitions, the order or item using the scrap

as raw material, pricing it at the same figure as that at which salvage account is charged.

The rest of the article deals with the four cases referred to above which are taken from plants which manufacture machine tools, enameled steel reflectors, fractional horse-power motors, and brass castings.

Co-operation and Cost Control. By John W. Robinson, National Association of Cost Accountants, 180 West 42 Street, New York City.

The outstanding characteristic of this official publication is the emphasis on the human factor in cost control. The author has developed in a most interesting manner one side of cost accounting which is frequently overlooked.

The writer thinks that control accounts have

been the source of quite a little misunderstanding between accountants and operating men. Operating men—managers, superintendents and foremen, are likely to resent anything that has the appearance of an attempted exercise of authority over them by accountants, and too many cost accountants, through thoughtlessness or lack of judgment, have invited the hostility of their operating associates in business.

He raises the question as to what control of cost accounting is and states his own opinion as follows:

Cost accounts are not under control when the cost figures obtained are merely balanced, or matched, in their money totals, with the control, or aggregate accounts in the main books of account. The figures must also be based upon accurate records of production, of the labor spent on each separate lot of product, of the use of equipment and supplies, and upon such other information, regarding the performance of the work done in the factory, as may be necessary in order to record and fully explain the production costs. To say that cost accounts are under control merely because the wages charged to jobs or processes agree in money total with the factory payroll, because the total value of material and supplies drawn from the stock rooms appears to have been charged out to the various jobs or processes going on, and because all other productive expenditures have been somewhere charged into the manufacturing accounts, is as absurd as it would be to consider an adding machine list of balances in a ledger as a satisfactory and complete trial balance.

Inasmuch as full cost control cannot be exercised through control accounts, but must be based upon co-operation between cost accountants and the operating men, the necessity for a working understanding between these departments is too obvious to call for comment.

Cost figures, he says, are often compiled without even consulting the men whose work is most closely affected by them.

Meeting criticisms of his superior officer, based on figures prepared by a secretive cost accountant, is not likely to fill the operating man's heart with a great love for the cost man, and—the war is on!

This policy is very foolish because

Apparently the operating men have quite as much control over the cost situation as has the cost accountant.

Obviously the cost accountant cannot control all of these men, though he may, through the backing of the president or other officials of the company, be able to compel them to supply him with figures of some kind.

The absolute necessity of the cost accountant to "sell" himself to all those he comes in contact with in the shop is emphasized throughout the article.

I think the trouble lies in that word control. It is a word that smacks of Prussianism. The central office, or the cost accountant, can get *cost figures* by controlling the cost situation from start to finish, but if real, reliable, informative *costs* are to be obtained, there must be not *control* but *co-operation*—not control of operating men, in any phase of their activities, by accountants, but mutual helpfulness between the office and the factory.

The cost accountant must sell his cost accounting to the factory men. He must show them its uses, and explain the methods by which he arrives at his results. He should keep his figures up to date, so that he may be in a position to inform the operating men promptly of any significant fluctuations, in order that corrective steps may be taken without delay when anything is going wrong.

It is unfortunately true that some corporation presidents and higher officials also have the idea that cost figures are useful only as a means of gauging the general efficiency of operating men, as a means of arriving at profits on sales, or as a basis for estimating costs on future business. They believe that it is unnecessary or unwise to give any detailed information regarding manufacturing costs to their operating managers or foremen.

To my mind paying a factory manager or a superintendent to take charge of manufacturing, and then refusing to provide him with the details of his manufacturing costs, is like calling in a doctor and then refusing to let him take your temperature, feel your pulse or look at your tongue. The cost accountant should first sell his services to the manufacturing man, and then sell them to the higher officials.

Too many cost accountants sell themselves to the president, or comptroller, or auditor, and entirely neglect to sell themselves and their cost accounting to the manufacturing men. Once the interest and co-operation of the factory men, the superintendents, and the foremen have been secured the rest is mainly a matter of bookkeeping. But if the cost man neglects to enlist that co-operation, and arouses their antagonism, his cost accounts will soon become dead and mechanical things, not likely to be of much practical value to the business, or to reflect much credit on the cost accountant who has compiled them.

The writer also touches on the mooted question as to whether or not the cost system of a company operating a number of separate plants should be centralized or decentralized and outlines one method of decentralized control which has worked successfully.

The Employees' Magazine. By H. A. Eddy, The Collins Industrial Council, 226 Columbia Avenue, Philadelphia, Pa.

This outline of publication methods of employees' magazines was presented before the Industrial Editors Conference at Philadelphia in March.

The two main divisions of the outline are "Functions" and "General Content."

Especially valuable are the outlines for informational articles and for news items. The outline for the latter is typical of the general mode of treatment and therefore may be quoted.

1. Athletics and Recreation
 - a. Baseball, basket ball, bowling
 - b. Noon-hour games
 - c. Interdepartment and interplant sports
2. Social Functions
 - Picnics, dinners,
 - Dances, parties, entertainments
3. Religious and Musical Activities
 - a. Noon sings
 - b. Band or orchestra concerts
 - c. Chorus and Glee Club concerts
 - d. Minstrel Shows

4. Organizations—Clubs—Committees
 - a. Insurance and benefit
 - b. Service and foremen's club
 - c. Library, restaurant, etc.
5. Individual Jobs of Employees
 - a. Machines or equipment that they use
 - b. The part they turn out
 - c. Notable achievements
 - d. Awards for suggestions or services
 - e. Promotions
6. Home and Community Life
 - a. New homes, autos, musical instruments
 - b. Gardens
 - c. Cooking and baking recipes
 - d. Baby picture pages
 - e. Sewing and cleaning
 - f. Health notes
 - g. List of classified want ads
7. Personals
 - a. Introduce new employees—(photographs)
 - b. Visitors to plant
 - c. Births
 - d. Engagements
 - e. Marriages
 - f. Illness
 - g. Vacations
 - h. Original poems, limericks and puns
 - i. Hobbies or patents
8. Illustrations, Sketches, Cartoons and Snapshots

These are the life of the publication and should be given prominence wherever possible and in connection with all articles.

Industrial Relations Series, Bulletin No. 2. Department of Labour, Ottawa, Canada.

This bulletin is a report of a conference on industrial relations held at Ottawa early in the year. It is issued as a supplement to *The Labour Gazette*. Complimentary copies may be had by addressing Hon. G. D. Robertson, Minister of Labour.

Of special interest is the address by Mr. A. H. Young, Manager of Industrial Relations of The International Harvester Company of Chicago. Most of his address is devoted to a description of how the Industrial Council plan of The International Harvester Company has worked out during the two years of its existence.

Among the other addresses printed in this bulletin are those by William M. Gray, Vice-President and Assistant General Manager, Gray-Dort Motors, Limited, Chatham; George Valentine, Assistant General

Manager, Massey-Harris Company, Limited, Toronto; John H. Frye, Manager of Industrial Relations, Canadian Consolidated Rubber Company, Limited, Montreal; J. H. Coffey, Jr., Factory Manager, Gutta Percha and Rubber, Limited, Toronto; R. M. Olzendam, Secretary, Department of Industrial Relations, Spanish River Pulp and Paper Mills, Limited, Sault Ste. Marie, Ont., etc.

The bulletin concludes with a brief résumé of the conference by the Minister of Labour, Hon. G. D. Robertson.

A New Slant on a General Sales Conference.

The Monroe Calculating Machine Company, Woolworth Bldg., New York City.

This pamphlet gives practical advice on conducting a sales conference. It contains a chart which shows how to divide the duties of a conference among the department heads of an organization. It tells how to choose the curriculum, select teachers, raise morals from mass singing, etc.

Saving to Society From the Use of the Comptometer. Felt and Tarrant Manufacturing Company, Chicago, Illinois.

This pamphlet—if it might be called such—is really a report by Lybrand, Ross Brothers and Montgomery, Accountants and Auditors. The pamphlet is, of course, an advertisement but it is worth reading for what Lybrand, Ross Brothers and Montgomery say of one adding machine is true of several others.

The accounting firm promptly calls attention to the several shades of meaning applicable to the word "savings." In order to avoid confusion, the firm limits the use to "the avoidance of spending or losing, or the prevention of waste, which make possible, at the same total cost as formerly, greater production, or broader distribution, or which reduce the cost of such activities, or in other ways benefit mankind as a whole."

It lists these savings somewhat categorically, as "Savings due to greater accuracy," "Savings in stationery," "Savings due to lower salaries," and especially savings made possible as the result of

prompt receipt by executives of reports immediately wanted.

The report makes the following result about one of the tests made:

The test conducted by us consisted of work of the sort that occurs in everyday routine of commercial accounting, including such as the computation in connection with the preparation of a production and stock-on-hand report; the calculation of percentages; figuring tonnage, inventory items and discount; verification of freight way bills; footing and cross footing. The schedule was planned to keep an average clerk busy for a week. Neither clerks nor operators understood that they were doing anything but some regular work.

In this test, the average time required by clerks was 43 hours, 34 minutes; by comptometer operators, 16 hours, 7 minutes,—a net saving of nearly 1½ for each comptometer. In addition, it should be noted that compared with 64 errors made by the operators, the clerks were guilty of 587 errors.

The concluding paragraph of the report emphasizes the well known truth that to err is human. Forgiveness may be divine, but it is hard to forgive when errors have resulted in serious financial loss to the company. The pamphlet, of course, may be obtained gratis. It is a good example of how to show rather than to tell the merits of an office appliance.

Men, Women, and Morale. Division of Industrial Service, Metropolitan Life Insurance Company, 1 Madison Ave., New York City.

Clearly and succinctly, this brochure sets forth the methods followed by a great insurance company in solving the problems of industrial relations. Its brief foreword points out that welfare work is no solution of the labor problem but it is a step in the general movement toward recognition of the mutual interest of employer and employee. Attention is called to the fact that not every feature of the welfare work described in this pamphlet will prove universally adaptable.

In the selection of workers, a scientific method is followed. First of all there is a psychological examination to measure the mental ability of the applicant. A report of family and personal history furnishes a sound basis for a physical classification. A question blank is used for the medical exam-

ination, which is similar to the one used by the company in examining applicants for ordinary insurance. Every employee receives a physical examination once a year.

One chapter, devoted to the subject "Making Good Health Contagious," aims to show the character of the work done. It may be said in passing, that on stormy days umbrellas are provided free, but must be returned the next day.

Industrial plants who conduct restaurants or lunchrooms will be interested in the chapter which takes up the beneficial effects of a well-balanced diet upon the workers' efficiency. Among the practical suggestions offered is the following:

To avoid waste, the employees check off on the menus the food they desire for the following day. There is a range choice at every meal and monotony is carefully excluded on the menu card.

"From Actuaries to Aigrettes" sounds more like a sensational headline than a chapter head of a pamphlet on industrial relations. The following quotation shows how practical is the work of the educational department:

Training other than for advancement in the company is made possible for the women employees for whom the company organized, under a trained dressmaker, a sewing room, also, facilities for fitting and pressing.

Millinery classes, under two trained teachers, are also in high favor with the women employees. These classes are held after hours and there is naturally no compulsion to attend. The fact that they are always filled is evidence enough that they meet a real need.

To the casual observer, teaching women to sew their own clothes, and make their own hats, and the opening of the world of books to the workers may seem an adventure in altruism of doubtful value. Second thought points straight to the undoubted benefits of such a course. While there may be no immediate profit to the com-

pany, there, nevertheless, accrues from such a policy a very considerable asset in the shape of better standards of citizenship among its employees.

Social activities are described somewhat in detail in one of the chapters. The concluding chapter outlines the chances to save.

The pamphlet may be obtained gratis upon application to the Division of Industrial Service, at the address already given.

The Public Refuses to Pay. By A. Lauriston Bullard. Marshall Jones Company, Boston, Massachusetts.

This booklet of 96 pages is made up of reprints of editorials which deal with labor problems and which were first published in *The Boston Herald*. These editorials show how the public, because of union rules, has had to carry unnecessary burdens.

Onward March of the Open Shop. National Association of Manufacturers of the United States of America, 30 Church Street, New York City.

This bulletin takes up such subjects as "the inefficiency resulting from outside interference," and "the injustice coming from minority rule." According to this bulletin, union rules limit the production and a closed shop forces monotony and thereby enables some employers to fleece the public, but drives other employers out of business.

As might be inferred from the title, the bulletin believes that the open shop is more beneficial to the community, and results in greater efficiency in industry. Copies of the bulletin are mailed free on request. Such requests, however, should be careful to specify Bulletin No. 47, as the one desired.

CHRONICLE AND COMMENT

ACCI-DON'TS

Instead of heading its rules "Accidents," the American Ever-Ready Company puts at the top this coined word, "Acci-don'ts."

Among these "acci-don'ts" it mentions the following:

- Don't take chances.
- Don't ignore a danger warning.
- Don't use poor tools; have them repaired.
- Don't work with chemicals without wearing goggles.
- Don't touch a machine when it is running.
- Don't neglect small bruises and slight cuts; have them properly dressed at the dispensary.

WHY STORES LOSE TRADE

A statistical study made by the Central Ohio Paper Company as to the reason why 197 private homes discontinued buying from a certain retail store disclosed the following causes:

Indifference of sales people.....	47
Attempts at substitution.....	24
Errors.....	18
Tricky methods.....	18
Slow deliveries.....	17
Over-insistence of sales people.....	16
Insolence of sales people.....	16
Unnecessary delays in service.....	13
Tactless business policies.....	11
Bad arrangement of store.....	9
Ignorance concerning goods.....	6
Refusing to exchange goods.....	4

MEDAL FOR EMPLOYEES

To Bell Telephone employees who carry out the ideals of Theodore N. Vail, a medal, known as the Theodore N. Vail Medal will be presented. Any employee who has performed an unusual service in connection with the telephone work, either in his own line of employment or in something having to do with the service, is eligible for the medal.

The Bell Telephone News, employees' magazine of the company, says that Adolph A. Weinman, a noted New York sculptor is designing the model from which the Vail medals will be made.

Says *The News*:

The Theodore N. Vail Medal will and should occupy a distinctive place among medals. It is not a medal for heroism alone; it does not encourage or reward unnecessary or fool-hardy risks. It is not for faithful service alone for we have the service emblem. It is not for service otherwise rewarded—such as inventions or developments in the telephone art. It is particularly for those Bell people who carry out Mr. Vail's ideals in their daily responsibilities of providing telephone service for the American public.

MAKING WORKERS PARTNERS

On April 1, 1921, the plan which enables employees of the Standard Oil Company of Indiana to acquire stock on the instalment plan went into effect. The employees will pay for the stock in small instalments and receive from the company a gift of 50 per cent of the amount they buy—this gift to be utilized in purchase of additional stock.

The Stanolind Record, employees' magazine of the Indiana Standard Oil Company, gives as the reason for this move the desire of the company to have its employees become partners in its business and share in its profits.

The acceptance of this plan by an employee is optional. In order to avoid fluctuations in the market price of the stock and to enable an employee to know how much stock is being purchased for him, the price at which stock shall be bought during each year of the plan has been fixed at whatever may be the average price of the stock for the period of six months prior to March 31 of each year—the day on which the stock will be purchased.

CREDITS AND COLLECTIONS

Two letters that have helped two perplexing business problems are published in *The Bulletin*, house organ of Lindeke, Warner and Sons.

The first letter deals with the aggravating circumstance which arises in the conduct of a credit business when a debtor buys merchandise for cash from a competitor. For such a case the following letter achieved results:

Dear Customer:

The fact that you owe us an account that you do not feel able to pay just at this time is no reason why you should deny yourself and your family the advantage of trading with us during the period of Special Low Prices at ——'s Store. We will be glad to see you and to have at least a portion of the cash trade you have been putting somewhere else since you concluded that it was not convenient for you to pay what you owed us and that it was necessary in consequence for you to quit trading with us. We will treat you just as well as we know how and will sell you good merchandise for less than you can buy it elsewhere. The money that you can save will enable you, in a short time, to make a partial payment on your indebtedness to us, if not to pay it in full.

If we had the confidence in your honesty and ability to trust you and you have not paid us, we feel that we are entitled to your business on such merchandise as we are selling as low as others sell or lower. Doesn't this appeal to your sense of fairness? We are not "mad" at you because you cannot pay us all you owe us at once. We understand how these miscalculations can come about. Of course, we want you to keep your indebtedness to us in mind and to pay us in our turn as rapidly as possible. We have a number of good friends who have owed us for a considerable length of time, whose credit accounts are closed, but who trade with us right along and who get the same courteous treatment that we give all our customers. We think just as much of this customer as of any other.

Won't you throw aside any little mistaken idea you may have as to how we feel toward you and join the ranks of the good fellows and help yourself while helping us?

Cheerfully yours,

Another difficult task is changing the policy of a credit business to a cash basis of operation. The success in this case is largely attributed to the following letter:

Dear Customer:

By selling for cash only we will be able to sell for less on account of cutting out the expense and labor of bookkeeping, bill-making and collecting. We will be able to sell for less because of the saving of interest on money that, under the credit system, would be invested in accounts, also because of the elimination of loss from poor accounts. We will have the time and vital energy to devote to more vigorous selling campaigns for your benefit and our own.

Owing to the large and rapidly increasing number of cut-price items, it would be very confusing and practically impossible to maintain

and handle fairly a double set of prices all through, and we are sure there are very few of our credit customers who will not gladly pay the cash and get the much lower prices.

Our coming to a strictly cash basis is no reflection on your credit, your willingness, and your ability to pay your bills. It is simply a necessity as far as we are concerned, even if we were to stay in business, and is a course that any merchant who is really closing out must follow.

In order to relieve the general distressing situation as much as possible for our customers, we have for months been steadily cutting the prices on merchandise all over the store. Outside of groceries we have made no distinction in price between cash business and charge business. In the grocery department alone we have 117 distinct cash bargains. On less than half-a-dozen of these 117 items has there been any decline in the wholesale markets. Practically all the reductions have been arbitrary ones, losses, taken voluntarily by us for the purpose of making your money go farther and for the purpose of drawing outside trade to all our departments so that we might close out certain lines and raise the money to carry the accounts for our friends and keep up our strictly staple stock.

We hope you will understand our viewpoint.

Yours cordially,

AGE OF SERVICE

"This is the age of service," says *Speed-up*, official publication of The Submarine Boat Corporation.

Service must take the place of "the eye-for-an-eye" logic of yesterday's business which flourished under the platitude: "Business is Business." In its place service must become a part of every business transaction.

To the business man, the extra cost of service is regarded as a selling cost.

The customer appreciates these little courtesies and every dollar expended in service returns overwhelmingly in odds in the favor of the modern business executive who conducts his affairs in the understanding that this is "The Age of Service."

"To Reduce the Cost and Improve the Quality of Service" is the slogan adopted by the National Automobile Chamber of Commerce. In a bulletin issued by the Chamber a decision was reached by that organization on how to deal with the subject in a national way.

In order to impress the public with the pertinence of the slogan it will appear on all printed

matter and on the letter-heads of service departments and organizations. The automobile industry is interested in better service and is endeavoring to influence dealers with the importance of lending their aid to that end.

SALES TAX PLAN

Editor of *Administration*:

You must admit that a tax levy upon undeterminable amounts creates a vast amount of "workless work" for accountants, appraisers, tax service pen pushers and an army of Federal and State Taxation Department hirelings. You must also agree that what these specified parties obtain for their services comes from the consumer's pockets, and each one of us is a consumer.

It is my contention that the present tax laws are the "mustard gas" to the payrolls of our farms, workshops and merchandising stores, as well as to our Merchant Marine. The ratio of man-power hours devoted to business profits tax law matters to the work hours consumed in producing and selling our wants to us, if determinable for publication, would indicate the present enormous overhead, in addition to taxes, which absurd tax laws have inflicted upon widows, orphans, wage-earners, starched-collar salary earners and all other consumers.

Overhead, both governmental and business (farming is a business) is a cost that cannot be kept out of the selling price of goods exported nor out of goods purchased from the retailer.

To my mind it is only because of ignorance of the elementary principles of business and of shortsighted selfishness that the business profits tax laws have friends today.

To cut down overhead the present tax scheme which levies taxes upon a guess (undeterminable amounts like business profits) should be superseded by laws that levy taxes upon determinable amounts. Because sales are determinable is the fundamental reason why the writer's sympathy is with the practical business men who are spending time and money fighting for sales tax plans.

The title of your magazine, *Administration*, indicates that the publishers expect practical business men to buy the Business

Journal. Would a business man expect to find therein articles which seem to recommend keeping on the books, laws that increase overhead? Even if it is the policy of this publication to cater to students of business, bookkeepers and accountants, is it wisdom to allow its columns to be exploited by advocates of complex tax laws and satirists of sales tax plans? Long ago *The Journal of Accountancy* lost my personal support simply because I felt it was "out of step" with business men upon taxation matters.

Some party or parties are responsible for the installation of systems (tax collection systems) without giving due consideration to the cost of maintenance. The practical business men are certainly justified in their opinion that, without the aid of members of my profession, it would have been impossible for lawyers to formulate and put into operation our various State and Federal tax laws.

In behalf of my profession it gives me pleasure to state that I hold evidence showing I am not the only certified public accountant who condemns "profits from business" as the basis of tax laws.

Hoping that some of the columns of your journal will be utilized for the purpose of showing that overhead can be quickly cut by the substitution of a sales tax plan for the entire miscalled Federal income tax scheme, I beg to remain

Cordially yours,
(Signed) W. C. Gray.

Boston, Mass.

FOREIGN TRADE

In his address before the Merchants and Manufacturers' Association William C. Redfield, former Secretary of Commerce and President of the American Manufacturers' Export Association, described the Foreign Trade Financing Corporation as "a new tool" in foreign trade, which "can take the foreign buyer and connect him up with the domestic seller, pay the latter and extend to the former the time he needs to work out his own payment."

Mr. Redfield prefaced his definition with a clear summary of international trade conditions to show the importance to American

prosperity of seizing the opportunity to expand commercially in foreign fields. He then added:

Few will deny that the world readjustment has moved forward in the last few weeks. The abandonment of the proposed sympathetic strike in Great Britain, the decision of the Railway Labor Board in this country, the German decision to accept the Allied demands, were all definite gains. Yet there remains enough of ill to suit the morbid tastes of the worst pessimist. Copper, cotton and grain remain unsold; the great steel industry runs at barely 40 per cent of capacity. There is much unemployment and a great deal of idle machinery. We have much to sell but buyers are scarce and many of those that would buy are unable to pay, and at a time when we are eager to dispose of the products of farm, mine and factory, our domestic trade is dull and our exports fell off sharply during March following earlier recessions. Russia remains a dark background. I am not here to suggest a patent medicine but to offer a working tool, in itself not new, but one which we have not yet used, though tried for many years in other lands and found of service and profit. It is something which conditions have not until today required us to adopt.

It is not intended to help any particular individual or group. It is of special service to industry, and yet not to any one industry especially as compared with another. It will be helpful to the banking world. It is not a new competitor—it is a new friend. It begins where the banker of today has to leave off, and does for his customers that which he cannot with safety do for them, and in so doing relieves a certain tension upon them as well as upon himself.

We propose with authority of law to establish, under supervision of the Federal Reserve Board and guided by a Board of Directors which shall represent the entire country a form of foreign banking familiar from long use to our British competitors and singularly successful in their hands. We have about reached the end of our present credit machinery. Industries on the one hand, with most of their capital necessarily locked in materials, machinery, land and buildings, cannot in the nature of things grant the long credits which buyers must have who are obliged to earn with the tools and materials they buy the means of paying for them. Banks with demand liabilities and under legal restrictions as to rediscounts are almost equally helpless as respects credits of six, twelve and eighteen months and perhaps more.

We want to sell—nobody doubts that. Others want to buy—that is equally clear. Our own country cannot use all its products—every man in the street knows that. A large part of them

must, therefore, be sold abroad. Men abroad cannot pay cash for them. They must have long time but neither farmer nor merchant, industry nor bank can give the long time they require. What then are we to do? Are we to sit still and mourn, regretting the depression?

There are men all over America who have goods which they cannot sell at home and are able and anxious to sell abroad. There are men abroad equally eager to buy those goods. Neither the men in Ohio nor their banks nor the men abroad can do as they want in the matter as things now are because there is no tool with which to connect them^u up one with another. The Foreign Trade Financing Corporation is the tool. It can take the foreign buyer and connect him up with the domestic seller, pay the latter and extend to the former the time he needs to work out his own payment.

But on what securities will credits be given? On any kind that may prove available and which will stand the test of searching scrutiny. Here the deposit of government provincial or municipal securities; here the pledge of city or port revenues; here the guarantee of a government itself; here a good first mortgage; here the deposit of salable commodities; yonder the guarantee of a bank or a sufficient endorsement. Collateral of many kinds exists, not always, indeed as what we know as bankable security, meaning that which is instantly convertible, but yet collateral, sound and good for an institution which has no liquid liabilities and whose purpose is to furnish credits of a kind which shall enable its debtors to work out their own payments.

N. Y. C. P. A. SOCIETY

At the annual meeting of the New York State Society of Certified Public Accountants, held May 9, 1921, the following officers of the society were elected to serve for the ensuing year:

Howard B. Cook, President
Robert H. Montgomery, 1st Vice-President
Willis S. Whittlesey, 2nd Vice-President
James F. Farrell, Secretary
James F. Hughes, Treasurer

PAPER CURRENCY

The rapid increase in the volume of Federal Reserve currency when it was first placed in the hands of the public provided a more than customary proportion of new notes, according to the Sixth Annual Report of The Federal Reserve Bank of New York. But now the necessity of printing

an immense volume of permanent Liberty bonds with which to replace the temporary bonds sold during the Liberty Loan campaigns has made it impossible to keep that increased volume of currency in good condition.

Although the Bureau of Engraving and Printing has made every effort to meet the requirements of both currency and bonds it has been found necessary to extend the life of the notes in circulation in 1920 to about 16 months. In 1916 the average life of a note was 12 months. This has left in use many notes which formerly would have been considered unfit for circulation.

COST ACCOUNTING CONTEST

Twenty-five years ago cost accounting was practically unknown in the United States. Even ten years ago there was very little knowledge of what might be called the modern science of cost accounting. The war with its cost plus contracts was instrumental in introducing the value of cost work to many American industries. At the present time, however, accurate knowledge of costs has become a vital necessity for any manufacturer who wants to solve the re-pricing of his product on an intelligent basis.

The schools and colleges of business administration are alive to the importance of the subject and during the past few years considerable progress has been made in standardizing the methods of teaching cost accounting and in providing better facilities for training men for this profession. The widespread interest in the subject is indicated by the large number of men who have this year entered in the Annual Prize Competition of the National Association of Cost Accountants. This competition is open to regularly enrolled students in resident schools offering instruction in cost accounting.

This year upwards of thirty men have entered the competition, representing such institutions as New York University, University of Minnesota, University of Pennsylvania, University of Oregon, Northwestern College, University of Pittsburgh, Cornell University, and many others. Subjects chosen by the candidates reflect the

practical aspects of the instruction which is offered in these institutions. For example, among the topics are "A Cost System for a Department Store," "A Cost System for a Chain of Retail Lumber Yards," "Method of Accounting for Scrap," "A Cost System for a Silk Mill," "Payroll Analysis for Aeroplane and Kindred Industries," "Costs as a Basis of Standardization."

"GET THE HOOK"

There are hundreds of ways of selling sporting goods, says *The Zenith*, the monthly service magazine of the Marshall-Wells Co. In order to promote the sale of fishing tackle, each hook sold should contain a printed card or slip, bearing the dealer's name and address, with instructions for removing fishhooks that become caught in some part of the flesh. This practice would enable a sporting-goods dealer to sell twice as much fishing apparatus through the advertising value of the emergency slip.

This device originated from the United States Public Health Service and was prefaced by the caution:

If a physician is available it is best to cut the line from the hook and entrust its withdrawal to an expert.

The first-aid device printed on the slip can be taken from the directions recently published in one of the American Red Cross Bulletins.

BUSINESS DECALOGUE

"Ten Commandments" by "The Boss" is an amusing feature in *The Manufacturers Trust Co. Quarterly Bulletin*. Behind a rather grim humor, however, are concealed some solid facts.

Rule 1. Don't lie—it wastes my time and yours. I am sure to catch you in the end and that's the wrong end.

Rule 2. Watch your work, not the clock. A long day's work makes a long day short, and a short day's work makes my face long.

Rule 3. Give me more than I expect and I'll pay you more than you expect. I can afford to increase your pay if you increase my profits.

Rule 4. You owe so much to yourself that you can't afford to owe anybody else.

Keep out of debt or keep out of my place.

Rule 5. Dishonesty is never an accident. Good men, like good women, can see temptation when they meet it.

Rule 6. Mind your own business and in time you'll have a business of your own to mind.

Rule 7. Don't do anything which hurts your self-respect.

Rule 8. It's none of my business what you do at night. But if dissipation affects what you do the next day and you do half as much as I demand, you'll not last as long as you hoped.

Rule 9. Don't tell me what I'd like to hear, but what I ought to hear. I don't want a valet to my vanity, but I need one for my money.

Rule 10. Don't kick if I kick—if you're worth correcting, you're worth while keeping. I don't waste time cutting specks out of rotten apples.

"SELLING THE STREET"

A novel way to get a mailing list, says *The Kodak Salesman* of the Eastman Kodak Co. is to get every person who looks at a window display to send in his name and address.

This was accomplished by a salesman in the following way. A picture was framed and placed conspicuously in the front window with the notice: "This picture has no name!" A list of prizes for the winner of the best title for the picture was printed beneath the picture with the suggestion that the public was invited to come in and drop a card with their name, address and suggested title, in a box secured for that purpose.

The result of the scheme was that more than a thousand people dropped signed suggestions into the box. The winning prizes were distributed and the store had the names and addresses of at least one thousand prospective buyers who could be circularized.

NO ACCIDENT MONTH

The month of May is to be "No Accident Month" in the Illinois Bell Telephone Plant Employees' Association. "Do more

than think—make it a reality; May 1st to 31st. No accidents," is the slogan.

Warren G. Harding, President of the United States, in a letter comments on the plan in part as follows:

Experience has thoroughly demonstrated that effective organization can accomplish great and useful results toward the prevention of accidents, so great a proportion of which are really unnecessary.

Safety may be employed in connection with the handrails on wide stairways. Out of seventy-five persons who walked down the stairs in the telephone company, only six used the handrail so that if anyone were to slip, he would have nothing to save him from perhaps an injurious fall.

Other safety devices are distributed about the plant with the intention of keeping "safety" always in front of the employees until it becomes a part of their work.

SUCCESS SMILES

Teach your employees and sale-people to smile if you will make your business a success. *Good News for Bakers and Confectioners*, house organ of Jaburg Bros., thus sums up the problem of efficiency and retail management.

The concrete incident backs the writer's judgment. He says:

When a customer enters a confectioner's shop he has a friendly feeling toward someone. He is buying the candy for this person. The buyer is keyed-up, psychologically speaking, to a plane of friendliness and good-fellowship. A smiling salesclerk will make a sale and a steady customer; an irritable or an indifferent salesclerk will freeze the buyer's enthusiasm and even if he buys a box of candy in the shop, it is unlikely he will stop there again for another box.

CORPORATION TRAINING

Clothcraft, employees' magazine of the Joseph & Feiss Co., publishes the results of their English work with foreign workers. These classes have been carried on by the organization since 1917. Besides instruction in reading, writing, and diction, special courses are given in citizenship.

Part of the educational scheme was to place foreign-born and non-English speak-

ing students next to American employees so that the foreign student might have the benefit of hearing the English language spoken correctly. This practice was also maintained in the dining and the rest rooms.

At the last session members of the firm interviewed several of the employees who were speaking with an intelligent knowledge of English grammar and diction. When asked what was the greatest good they received from the English instruction, one man replied that he could understand the foreman and the other employees and was able to work twice as fast and earn twice as much.

One woman's feelings were more personal. She was delighted that the firm had given her an opportunity to learn English since she wished to send her little girl to high school and she had feared that the child would be ashamed of her if she were not able to speak English and read a newspaper.

EMPLOYEES' MAGAZINES

Industrial editors representing fifty industries and more than 500,000 employees in New York state, organized themselves, a year ago, as the Associated Editors of Employees' Magazines of New York state. On May 16, they held their first annual election at the Advertising Club, New York City and elected the following officers:

President, Spencer Horde, Editor of *The Kodak Magazine*, Eastman Kodak Company; Vice-President, E. T. Wilkins, Managing Editor, *Schenectady Works News*, General Electric Company; Secretary and Treasurer, George Herbster, Editor *The Arrow*, Cluett-Peabody and Company.

A business session in the morning was followed by a luncheon and an open session with speeches by Dr. Holmes W. Merton of the Merton Institute of New York; Stephen H. Horgan, photo-engraving expert of *The Inland Printer*; N. P. Winchell, Editor of *Paper*; Professor Jas. Melvin Lee of New York University School of Journalism, and E. A. Shay, Assistant Secretary of the Industrial Relations Association of America.

At the meeting an announcement was made that a publication devoted to house-organs and employees' magazines will make its first appearance in June. Bert Barnes,

200 Columbia Heights, Brooklyn, N. Y., will be its editor and publisher. Called *The Blue Pencil*, it will be miniature in size, $4\frac{1}{2}$ x $6\frac{1}{2}$.

Those who have made a study of employees' magazines say that something like \$10,000,000 is spent each year in producing and distributing such periodicals. The field has developed to such a rapid extent that it is the only branch of direct mail advertising which has an organization of its own, the House-Organ Division of the Direct Mail Advertising Association of America.

The Blue Pencil will deal with the practical side of publishing employees' magazines and will feature departments and articles by recognized authorities in the field, thus seeking to do for the house-organ what *The Mailbag* and *Postage* and other advertising journals seek to do in the Direct Mail Advertising field.

There will be departments devoted to engraving problems, paper and ink including a price list of the standard book papers, and such other practical helps and information as would enable the industrial editor, who is a potential buyer, to make his purchases advantageously.

Mr. Barnes is advertising manager for the Morse Dry-Dock and Repair Company, of Brooklyn, and editor of *The Morse Dry-Dock Dial*, a combination external and internal house-organ which has been very successful in its field.

STUDY OF CASH DISCOUNTS

Cash discounts allowed by manufacturers in certain industries to domestic purchasers of their goods have been studied by the Industrial Bureau of the Merchant's Association of New York. Twenty-one industries submitted reports as to their policy of cash discounts.

Although the policies in many industries are not entirely uniform the replies, as listed below, indicate the customary practice:

Baby Vehicles:	2%—30 days 60 days net
Biscuits and Crackers:	1%—10 days
Chairs:	2%—39 days (or less)
Chemicals:	No uniform practice

Chewing gum:	1—2%—30 days
Confectionery:	2%—10 days 30 days net
Cooperage:	30 days net
Feed:	No discounts allowed
Flint and Lime	
Glass:	1%—15 days 30 days net (from date of invoice)
Gears:	1%—10 days 30 days net
Automotive branch	2%—10 days 30 days net
Large gear or mill work	Usually 30 days net
Glue and Gelatine:	2%—10 days 30 days net
(Some few)	1%—10 days
Hardware:	2%—10 days 60 days net
(Small)	
Horn and Celluloid:	2%—10 days 30—60 days net (Sometimes 30 days extra)
Malleable Castings:	No discounts allowed
Medicinal Chemicals and Essential Oils (deal only with wholesalers):	1%—10 days 30 days net
Paints and Oils:	1%—10 days 30 days net (or less)
Pharmaceuticals:	2%—10 days 60 days net
Stamps:	1%—10 days 30 days net
Some mfrs.	2%—10 days
Many of largest mfrs.	30 days net
Stoves:	2%—10 days 30 days net (or 60 days with trade acceptance)
Surgical Dressings:	1%—10 days 30 days net
Varnishes:	2%—10 days 60 days net (or less)

FOREIGN CORRESPONDENCE

Among the interesting features of the National City Bank as printed in its employees' magazine, *Number Eight*, is the fact that its translators handle 1,400 letters a day in fourteen languages. As the majority of people in the bank do not realize the amount and nature of the work done in the Translating Department, *Number Eight* prints this data for their benefit:

There are at present in the Department twenty-six translators and all are required to know English, French, and Spanish, at least. Besides these languages, Portuguese, Italian, German, Dutch, Norwegian, Swedish, Danish, Russian, Polish, and Bohemian are translated in the Department.

These translators deal with incoming mail but the Bank has a tremendous out-

going correspondence in foreign tongues. The greatest bulk of the outgoing mail is in French and Spanish, and, like the incoming mail, must be checked and rechecked until it leaves the department in as perfect form as it can be made by the experts.

The most difficult types of correspondence the foreign department has to handle are the legal forms, wills, affidavits, etc.

PLANT STORES

Because of high prices more and more industrial plants are establishing stores for the benefit of their employees.

After three months of operation, the Scovill Company's store at Waterbury, Connecticut, publishes the following account in *The Scovill Bulletin*:

Those employees who use the store find that they are able to make quite a material saving and receive exceptionally good quality in the class of goods they purchase. The only complaint, if it may be called a complaint, which has come to the ears of those in charge of the store is that too high a grade of merchandise is handled.

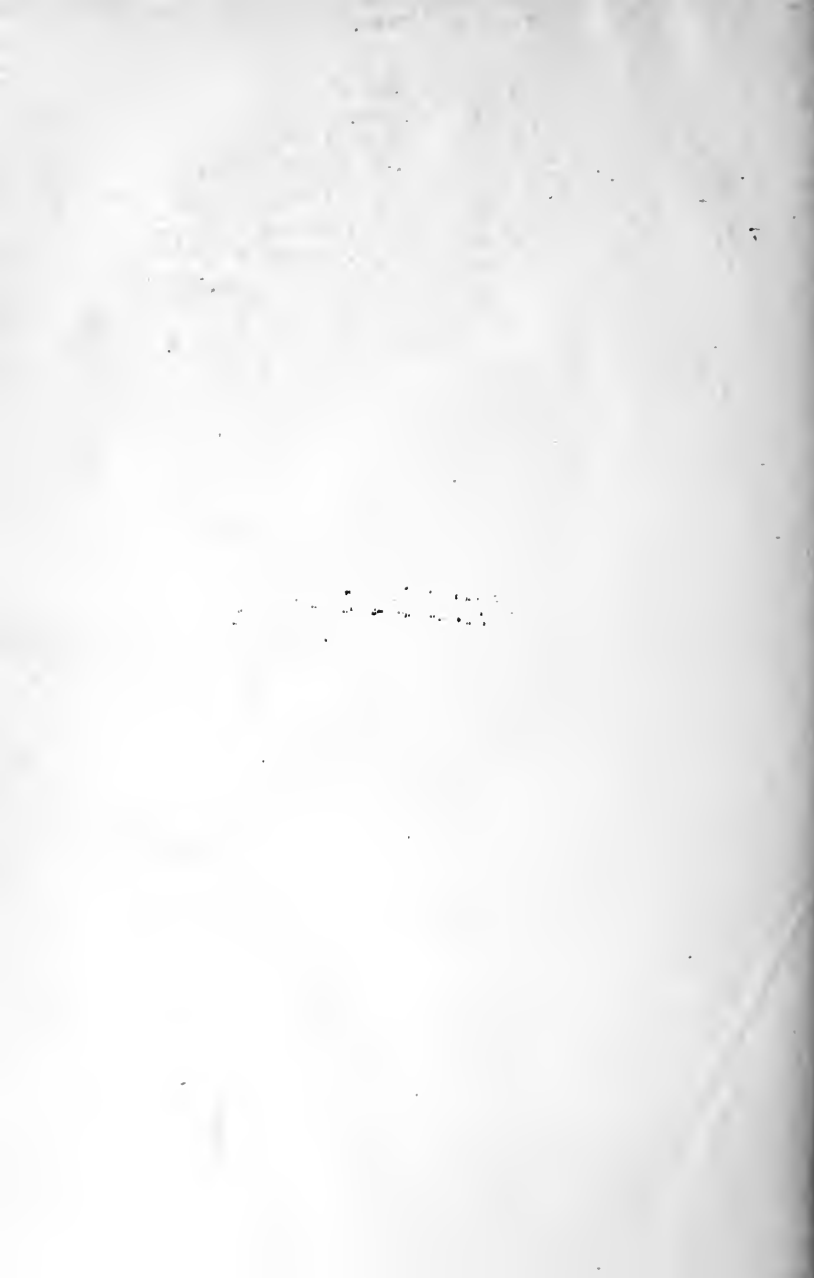
Those in charge of the store, however, feel that the better and more satisfactory plan is to give the employees of the company who patronize the store the best quality of merchandise at the lowest price possible. The company is making no attempt to show profit and has instructed those in charge to merely make expenses. This makes it possible to follow the plan of giving a first-class grade of goods and still offer them at low prices.

Some of the employees have taken advantage of the opportunity the company has offered them to buy their supplies at practically wholesale prices. This can only be done when purchases can be made in wholesale quantities, so these employees have joined together, listed their needs and have asked the manager to purchase the goods they wanted. In this way it has made it possible for the manager to buy supplies for them in wholesale quantities, turn them over quickly and place the goods in the hands of the employees at a very reasonable price, saving the employees anywhere from 15 to 20%.

The variety of merchandise which the store carries is constantly being enlarged and new articles are being placed in stock as rapidly as the demand for them makes it advisable to do so.

The store is open daily to all employees and their families, including those who have been laid off.





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